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IN THE MATTER OF:	
DISTRIBUTION OF 2000, 2002, 2003 CABLE ROYALTY FUNDS	No. 2008-02 CD 2000-03 Phase II

Tuesday,
June 4, 2013

Fourth Floor Hearing Room
Madison Building
Library of Congress
101 Independence Avenue, SE
Washington, DC

The above-entitled matter came on for hearing, pursuant to notice, at 9:00 a.m.

BEFORE: THE HONORABLE SUZANNE M. BARNETT,
Chief Judge
THE HONORABLE JESSE FEDER
THE HONORABLE DAVID STRICKLER

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RAUL GALAZ
DENISE VERNON

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P-R-O-C-E-E-D-I-N-G-S

9:03 A.M.

CHIEF JUDGE BARNETT: We are back on the record in the matter of the distribution of cable royalty funds for the years 2000-2003, Phase II.

And Mr. Olaniran, had you completed your examination of your client, of your witness?

MR. OLANIRAN: Yes, Your Honor.

CHIEF JUDGE BARNETT: Okay, thank you.

Mr. Boydston.

MR. BOYDSTON: Thank you, Your Honor.

CROSS EXAMINATION

BY MR. BOYDSTON:

Q Good morning, Mr. Lindstrom.

A Good morning.

Q My name is Brian Boydston. I'm the attorney for Independent Producers Group. You've testified that you provided Nielsen

diary data to the MPAA in connection with this proceeding, correct?

A That is correct.

Q And that that information constituted diary information for the four sweeps weeks during each of the relevant four years, correct?

A Including March and October in some instances as well.

Q Understood, thank you. Now I just want to confirm, I think you may have mentioned in your direct testimony, but I don't know if it quite made this clear. It seems an obvious point, but these ratings data, they don't reflect actual viewing by the population that they're serving. They represent viewing based on discrete numbers of people within the population being surveyed, correct?

A If I understand the question correctly, it is a sample that is being measured rather than the full census

population.

Q And so for instance, when there's a diary entry for a particular program at a particular time, one diary entry may be extrapolated on to a number of additional households, correct?

A That is correct.

Q Sometimes maybe it could be as much as 10,000, maybe more, maybe less households?

A Ten thousand would be high in terms of those weights, but it possibly could go that high. It's probably more in the range of a thousand for the most part.

Q And I understand that you've appeared in these proceedings for quite some time, decades?

A That's correct.

Q And you appeared on behalf of the MPAA in the 1997 proceedings that took place in the Year 2001, correct?

A That is correct.

Q Are you familiar with the September 2001 distribution order that came out of those 1997 proceedings?

A I don't recall the details.

Q Have you reviewed it at some time though?

A I'm sure that I have, but I don't recall when I did though.

Q Fair enough. Do you recall that in that decision on the '97 proceedings the CARP referenced a high incidence of zero viewing in the Nielsen diary data?

A Yes, I do.

Q And do you recall that in the '97 proceedings it was found that the aggregate zero viewing equaled 73 percent of all major broadcasts?

A I don't recall the details of it.

Q Would that figure of 73 percent surprise you or does that seem out of whack?

A No, it's actually very much in line that even with the people meter that

currently is the source of what's done for a $70 billion advertising business, that if you dive into it that there's approximately 65 percent of the quarter hours would, in fact, be zero viewing for stations. Now obviously, that's in direct relationship to the size of the audience to those stations, some more, some less. But that is not inconsistent with what's currently out there in the standard audience measurement.

Q You mentioned, in your answer right now, you mentioned metered ratings, correct?

A That is correct.

Q And I assume you're talking on a national level in your previous comment?

A Yes, I was.

Q On a national level would one see that sort of incidence of zero viewing for diaries as opposed to metered ratings?

A Again, it would be consistent across meters and diaries. It would not be

surprising to see those types of levels. And again, in direct relationship to the size of the station that's trying to be measured. And we try and be very inclusive for all stations and therefore there are a lot with very small viewing levels.

Q From your testimony yesterday, my recollection is that you were saying that the diary ratings or the ratings derived from diaries, there are many more diaries and much more diary data that Nielsen collects than metered data, correct?

A There are more sample households that are being measured. The extent of the data that's being collected, because the meter is 365 days a year, is very extensive, so I wouldn't phrase it that way. But there are certainly much larger sample sizes with the diary.

Q In terms of number of households covered, my understanding from your testimony was that the diaries are much greater than the

meters?

A That is correct.

Q On what kind of a scale?

A I don't know exactly what the metered sample was at the time, but I would estimate maybe 5,000 or 10,000 during that period of time. Currently, right now, nationally, it's 25,000. And the diary itself is about 25,000 per week within independent samples so that we're measuring about 400,000 plus households a year with the diary.

Q So at the time in question, 2002, 2003, your estimate, just refresh my recollection, your estimate at that time is that there must have been a couple hundred thousand diary households and what did you say, 25,000 meters?

A No, it's 25,000 now. It might be 5,000 or 10,000. I honestly don't recall.

Q So there could be as much as a 40 to 1 ratio during this time period of diaries to meters or maybe greater?

A That's correct.

Q Okay. Now isn't it true that the September 2001 order on the '97 proceedings directed the MPAA to decrease the incidence of zero viewing in its study if it was going to use such Nielsen data in the future?

A I don't recall.

Q Let me ask you to take a look at what's been marked as Exhibit 7 in the document in front of you there which is the testimony of Raul Galaz in rebuttal to the direct statement of MPAA-represented program suppliers and that's Exhibit 7 to the Galaz testimony in rebuttal to the MPAA.

A Exhibit 7?

Q Yes. And you can go past that page that just says Exhibit 7. I'll represent to you that this is a printout of one of the Nielsen data, raw data files that was provided to IPG in this matter. And if you could just look at the first page or so. Does this look like, does the data that's represented here

look like Nielsen diary data to you?

A Yes, it does.

Q And my understanding is these are supposed to be representing 16 weeks of television viewing, correct?

A If it's 2003, I would -- I would assume, but I'm not completely sure.

Q Okay, part of the reason for my inquiry here is that in terms of -- well, do you see -- it's about the fourth column over. It's entitled zero viewing instances, no, no. It's the next one, aggregate instances.

My understanding is those figures under aggregate instances, the first of which is 13,440, that these are the number of quarter hour time periods measured in these different entries. Is that correct?

A That would be my interpretation.

Q Now I'm going to have to do a little math here because I want to try and figure out how many quarter hours are in a week. And -- excuse me, how many quarter-hour

time periods are in a 16-week sweeps sample. And my calculation is that there are 4 quarter hours in every hour, multiplied by 24 hours in a day, multiplied by 7 days in a week, multiplied by 16 weeks gives a product of 10,752. And we can do it on our calculators. Does that sound right to you?

A The math as you were running through, I didn't follow and multiply it out to the 10,000.

Q Should we do that very quickly? Would you mind doing that very quickly just to confirm that? I can give you a paper and pencil or do you have the ability to do it in your head?

So it was 4 quarter hours times 24 hours in a day times 7 days a week times 16 weeks.

A Somewhere around 11,000 or so.

Q The figure I had was 10,752. Now as I look back at Exhibit 7, under the aggregate instances which is listing the

number of quarter hour time periods, what I see are numbers generally in excess of that, some close to double that or in fact, exactly double that such as the second entry at 21,504. Now it would appear to me that that means that on that second entry of WTBS that appears on the first page of Exhibit 7 that that would mean that actually what was being presented here in this raw data was more than 16 weeks of information, more like 32 weeks. Is that a reasonable conclusion?

A The aggregate number of quarter hours, yes.

Q And as I said if one looks down many of these, almost all of them seem to be in excess of 10,752. My conclusion from that was that while this data was aimed at providing 16 weeks of data, it actually provides a bit more than that. Is that a reasonable conclusion?

A It is including the additional measurement periods of March and October which

would end up adding a considerable degree of quarter hours to that.

Q Right. It just seems from the mathematical standpoint there may be some time even in addition to those two months, would you agree? Because two months would be an additional 8 weeks, because 8 plus 16 would be 24. And as I say, the second entry represents 32 weeks of quarter hour periods, so it seems that there must be some additional data coming into these beyond just the regular sweeps weeks, the additional two months of October and May. Do you know where that other time is coming from?

MR. OLANIRAN: Your Honor, I'd like to object to Mr. Boydston's line of questioning.

Mr. Boydston is actually implying that this data that we're looking at is in fact the raw data that Nielsen provided to IPG. In fact, it is not. This is an analysis that was prepared, I suppose, by Mr. Galaz, or someone

at IPG. For the purpose of this proceeding, Nielsen does not, for example, if you look at the last column, does not do zero viewing instances in its raw data.

This is not the data or the format in which you will find the Nielsen data. So --

MR. BOYDSTON: That contradicts his testimony so far. His testimony was that these numbers for minutes were what I asked him they are.

MR. OLANIRAN: These are not the raw data that was produced to IPG. You can direct the question to Mr. Lindstrom to see whether or not Nielsen calculates zero viewing instances. I'm pretty certain they don't.

MR. BOYDSTON: I haven't asked about that.

MR. OLANIRAN: You referred to these as raw data in your line of questioning and I just want to make sure we're clear about that.

CHIEF JUDGE BARNETT: The witness has already accepted this and has answered questions about it. You can cross examine, Mr. Olaniran.

BY MR. BOYDSTON:

Q Do you know where these additional minute quarter hour periods could have come from? As I said, you clarified and you had already testified that in addition to the 16 sweeps, there's oftentimes time for May and October. But it seems like there's even more in some of these entries and I'm just wondering if you have knowledge as to where the other minutes come from?

A Again, I'm not sure where all the aggregates are being built up to, but there are many instances where that could end up occurring.

Q Okay. Have you performed an analysis yourself in order to determine the existence of zero viewing in the raw Nielsen data?

A I personally have not.

Q Has someone at Nielsen done that as far as you know?

A Not that I know of.

Q Do you know of anyone else who has done that?

A Not in terms of specifically looking at that aspect that I recall.

Q My follow-up questions were because
-- and I asked you and you said "I personally haven't" which implied to me that maybe you knew that someone else had. That was all. But you don't know of anyone else that has done that?

A I can only answer for myself in this case.

Q Okay. Is --

JUDGE STRICKLER: Excuse me, counsel. I didn't mean to step on your words. May I ask him a question to follow up?

MR. BOYDSTON: Absolutely.

JUDGE STRICKLER: One of your answers before, Mr. Lindstrom, was that you understood that there were other reasons why the aggregates would total more than the additional two months. Counsel didn't ask you what those other instances would be that would account for that. Can you tell us what those other instances would be?

THE WITNESS: There could be situations like with GN. GN, there's actually two separate feeds that are going on, one of which is the local GN. The other is the satellite feed of GN which has in some cases different programming. It's possible if somebody were looking at the data, they would aggregate up each signal individually for the quarter hours and then put them together.

JUDGE STRICKLER: Sort of a double count on the WGN numbers, is that what you're saying?

THE WITNESS: Potentially that's one way of thinking about it, but again, I'm

not sure what are the occurrences in terms of how this is built up. What I had been answering originally was going this looks to be consistent with the type of data that would come out from what we were producing, but I'm not sure where the 21,000 directly were coming from.

JUDGE STRICKLER: And you said there were instances that you could imagine as to why it would be that you have the aggregate totalling more than the additional two months and you just gave the WGN example. Any other instances or is that all that you can recall?

THE WITNESS: That would be the one that -- that type of situation would be the one that would be most likely to come to mine.

JUDGE STRICKLER: Anything else?

THE WITNESS: Not that I can think offhand.

JUDGE STRICKLER: Thank you. Please proceed.

MR. BOYDSTON: Thank you.

BY MR. BOYDSTON:

Q Have you reviewed the rebuttal testimony of Raul Galaz in this matter?

A Very briefly.

Q Have you reviewed the rebuttal testimony of Dr. Laura Robinson in this matter?

A No, I haven't.

Q Based upon your review of Mr. Galaz' rebuttal testimony, do you have any disagreement that for this time period, 2000, 2003 the Nielsen diary data aggregate zero viewing was between 78 percent and 82 percent depending upon the year?

A I have no reason to disbelieve that.

Q Do you have any reason to disagree that the range of zero viewing for stations in the MPAA viewer study was between less than 1 percent and 99.9 percent zero viewing instances?

A I have no reason to believe that would not be the case.

Q Thank you. Now is it accurate that some of the station data that was provided by Nielsen to the MPAA included stations that showed 100 percent zero viewing for the selected stations?

A I could not say one way or another for sure on that.

Q Meaning you don't have any recollection as to whether that occurred?

A I do not have a recollection as to that specific.

Q Have you seen that instance before in Nielsen data?

A I haven't looked for that specifically. It would not be, again, inconsistent if it were a station with very, very low viewing levels, again, keeping in mind that the base population that we're looking is somewhere in the neighborhood of 100 million households. In many of these

instances, we could be looking for viewing that are at levels of a 1,000 during any given quarter hour. It takes a lot in order to find those which is why you need substantial sample sizes, but any given quarter hour only has 25,000 as the base sample. That's why in order to analyze that data, it really is imperative to aggregate is across time. Zero viewing is the specific quarter hours for which the sample sizes would be relatively low comparatively. And it really is necessary to aggregate across.

Q And the difficulty in doing that results in the incidence of zero viewing that we see, correct?

A Because individual quarter hours will be going against approximately a 25,000 sample size.

Q Right, if it was a 25 million sample size, that would probably be a different story, correct?

A Well, if it were two weeks, then

it would be 50,000; in 3 weeks, 75,000 and up to the 400,000 plus, it's just the individual quarter hours to look for zero viewing is again not the purposes for which the study was designed or terribly surprising when focusing on that micro level.

Q And that's the issue is that when focusing on that micro level, this particular study has its limitations, correct?

A If one were trying to decide on the audience for an individual quarter hour on a low-rated station, there would be high relative errors.

Q Correct, which makes it kind of a tough yardstick to use for this, doesn't it?

A No. Because the whole purpose is to aggregate programs across time. To aggregate across days on strip programming, to go across weeks and as those accumulate, you're accumulating sample sizes which is the way you eliminate a zero viewing issue. It's the way that it works even in the example of

the people meter that I discussed of going becomes an acceptable measure because, in fact, you aggregate across time.

Q Now the figures I mentioned a minute ago, in the '97 proceedings, there were 73 percent zero viewing in the raw Nielsen data and of these proceedings on these years it's between 78 and 82. Based on those simple numbers, it seems clear that in this study for these years, the incidence of zero viewing is certainly higher, isn't it? I mean it's 82 percent versus 73 percent on the high end, correct?

A But at the same time I think it's imperative to go. It's not 80 percent of the programs, in fact, have zero viewing. And so that all that that might tell you in terms of a decline or an increase rather and the degree of zero viewing would suggest that there is probably more fragmentation in the marketplace that would cause distant signals to perhaps have slightly less viewing. That is really

the main conclusion that you can draw from that type of data set.

JUDGE STRICKLER: I have a question for you about the zero viewing quarter hour segments. You said as the sample gets larger, you tend to correct for that. Does Nielsen know whether or not the quarter hours for the survey for one week which is a zero, whether or not the zero repeats for that same quarter hour for that same low-rated show in the next survey and then survey and the next survey or are these zeros all across the low-rated shows and you don't figure out which is which?

THE WITNESS: No, well, we don't take that step in the analysis. That's done further down the line. But that's sort of the way that this works is the idea that you may have a zero in Week 1, but when you go to that time period in that program in Week 2 and you're adding them in together that you are going to have a much greater likelihood that

you will find viewing in subsequent airings. And we're not producing the data specifically in the type of analysis that you're speaking to other than the end product as I understand it is ultimately an aggregation by program across time which is where you do end up sort of adding in the subsequent viewing. And you would not have anywhere near 80 percent of the programs with no viewing.

JUDGE STRICKLER: Yes, so when we see 80 percent zero viewing, we're not saying -- let me ask it this way, is that statistic showing that a particular show, a low-rated show, we'll call it Watching Paint Dry, a low-rated show. It's not zero every time, every quarter hour.

THE WITNESS: No.

JUDGE STRICKLER: Those 80 percent zeros could be Watching Paint Dry, Watching Grass Grow, two different shows.

THE WITNESS: Right. And if it turned out that it was on five days a week and

three days nobody watched it, not nobody watched it, but no viewing was recorded and in the fourth and fifth day there was viewing that was recorded, it would still show under that scenario 65 percent zero viewing. But the accumulated viewing across the five days would be a fairly accurate or a reasonably accurate reflection. And as you went across weeks so that you have independent samples adding to it, it will be a better and better number the more weeks and sweeps that are being combined.

BY MR. BOYDSTON:

Q Now isn't it true there are instances of zero viewing and not just for quote unquote small shows or small stations, but even big stations as well, is it not true that for instance WGN by far and away the largest station that's distantly retransmitted has what i would call anyway a high incidence of zero viewing in excess of 50 percent. Isn't that true?

A I don't know the specifics for GN and there are two reasons why that could happen. But first off, keep in mind as we've tried to stress broadcast stations at this point in time would almost be happy with one and two rating levels. You're dealing with small percentages and for cable viewing you're dealing with tenths of a percent as your typical rating level. So that even well distributed, well viewed networks are likely in the grand scheme of things to have relatively low viewing levels at any given point in time.

Q Isn't it true, you mentioned earlier you said well, it's not like we have 80 percent of programs with zero viewing, do you have an estimate as to what the percentage of programs are out there that have zero viewing instances?

A No, I do not.

MR. BOYDSTON: Your Honor, I'd like to mark Exhibit 504. It's a one-page

document. They are sticking together.

(Whereupon, the above-referred to document was marked as Exhibit 504 for identification.)

BY MR. BOYDSTON:

Q Now this is a document which I've only marked at the moment. It hasn't been admitted and I haven't moved for it to be admitted just yet. I'll represent to you this is a document that has been generated by IPG based upon analysis of the raw Nielsen diary data and it reflects here that for the Year 2000 out of 8,173 unique programs we have incidents of aggregate zero viewing of 42.65 percent. Do you have any reason to believe that that would be inaccurate?

A I have no reason to believe it is accurate either. And that's not question it. It's just simply I don't have the base information to be able to say.

Q Okay.

JUDGE STRICKLER: Counsel, just so

you can clarify so I understand the questions and the answers here. That final column, percentage of programs with aggregate zero viewing, does that mean as far as you're representing percentage of programs with any aggregate zero viewing or total aggregate zero viewing?

MR. BOYDSTON: Any.

JUDGE STRICKLER: Thank you.

MR. BOYDSTON: Total is a story for another day.

JUDGE STRICKLER: Fair enough.

BY MR. BOYDSTON:

Q Let me ask you to turn to Exhibit 8 in the document you have there in front of you. I'm sorry, Your Honors, it's just the next exhibit in that same document we were looking at.

CHIEF JUDGE BARNETT: Exhibit 8 to the Galaz rebuttal testimony to MPAA?

MR. BOYDSTON: And actually, belatedly, I'd like to move admit Exhibit 7.

MR. OLANIRAN: Objection, Your Honor, on the same basis that I made before. Mr. Lindstrom cannot authenticate this document and while he answered questions about it, I think his answers were more in a general form, not specific to the document.

MR. BOYDSTON: The witness acknowledged that this appeared to be information that did come straight from the Nielsen raw data. That's the purpose for which it's being admitted.

MR. OLANIRAN: Your Honor, this information did not -- it may have come from the Nielsen data, but this is not information Nielsen prepared. The only information Nielsen provided with respect to the diary is the raw data. This is not the raw data. Nielsen does not calculate zero viewing instances and Mr. Lindstrom's testimony has been very consistent with that.

I think you can attempt to put this in with the witness that sponsored this,

but I'm quite sure that Mr. Nielsen did not prepare this document.

CHIEF JUDGE BARNETT: The objection is sustained. Exhibit 7 to the rebuttal testimony is rejected.

MR. BOYDSTON: Not admitted.

CHIEF JUDGE BARNETT: Not admitted.

(Laughter.)

MR. BOYDSTON: Thank you.

CHIEF JUDGE BARNETT: I know you'll make another stab at it, Mr. Boydston.

MR. BOYDSTON: I appreciate that. Thank you.

MR. HARRINGTON: Your Honor, if I could be heard for a second?

CHIEF JUDGE BARNETT: You may.

MR. HARRINGTON: I note we didn't state a position on this, but the fact is we've never received this document. We haven't received any of the proposed exhibits that IPG has exchanged regarding MPAA. And if

we're going to have a meaningful involvement, we would like to be provided with a copy of the exhibits that are going to be proposed for entry in this case.

MR. BOYDSTON: Your Honor, this is not the case against SDC. I'm not talking to an SDC witness.

CHIEF JUDGE BARNETT: Mr. Boydston, I thought we had made it clear that all documents were to be provided to all parties and so to the extent that you have not provided MPAA to Mr. Harrington or SDC documents to Mr. Olaniran, you need to do that.

MR. BOYDSTON: All right. I mean the only reason we haven't is as I said --

CHIEF JUDGE BARNETT: I understand your point, but you need to understand ours.

MR. BOYDSTON: Okay.

BY MR. BOYDSTON:

Q With regard to Exhibit 8, do you recognize this exhibit as containing

information from the raw Nielsen data?

A I recognize that it contains data that wouldn't have been there as well, given some of my perhaps speculation on the last one, I think I need to avoid this one. We didn't do data that was connected with the application of the program names.

Q Okay, are you referring to field three there?

A Yes, which seems to be a key component of the data set.

Q Is there anything else in this that you would add to that field three in your answer?

A I am not sure what the rest of the fields are either, but I do know that, in fact, the program name data we did not get involved with.

Q Okay, the field at the far right, do you have a recognition of what that is, based upon what the raw Nielsen data is?

A I'm not sure offhand. I could

speculate.

Q What's your speculation?

A Actually, I'm not completely sure.

CHIEF JUDGE BARNETT: We're not going to ask witnesses to speculate.

MR. BOYDSTON: He said I could speculate. That's why I followed up.

CHIEF JUDGE BARNETT: Could, but he's not allowed to.

MR. BOYDSTON: Fair enough.

BY MR. BOYDSTON:

Q Let me ask you to look back at Exhibit 7 and do you see stations on the left hand side of that document that based upon your experience you would believe were probably independent stations as opposed to network stations?

A Yes.

Q And do you see that those independent stations and I realize that this is something that did not come from Nielsen, but they show an incidence of zero viewing on

the far right hand corner, at least as represented in this document?

A Yes.

Q Do you have any reason to believe that there would be a difference between zero viewing of an independent station and a network station?

A There could be differences, depending on how this was calculated.

Q Just based upon what you see here, do you see that or do you believe that network-affiliated stations have a higher incidence of zero viewing than network stations?

A I'm not familiar with all the stations. I couldn't divvy them up in my mind.

Q Okay, let me ask the question just a little different way. In general, is it your belief that network-affiliated stations would have a different, fundamentally different zero viewing incidents than network

stations?

A The main reason why there would be a difference depending on how the calculations were done or whether or not the quarter hours with compensable programming were handled before the analysis was done or not, so that the network feeds would have been potentially stricken which would end up with a zero viewing cell.

We didn't do the program names associated with that so those instances should, in fact, come up with zeroes. I don't know whether they were within this analysis.

The second thing is is that, and it's a very broad type of statement and so it is going to vary piece by piece within this is that network programs will often have higher ratings which, in fact, may or may not lead to differences in the zero viewing cells, but it's difficult to say. I don't think there's -- you could necessarily make too general a statement on that.

Q I don't know if it's in front of you there or not, but I think I can ask a question and you can answer it without it in front of you. If not, let me know. What I'm referring to is your statement that you talked about yesterday and you provided several changes in your statement, as of yesterday, do you recall that?

A I do.

Q And particularly on page six of your testimony, you changed the references a couple of times from the MPAA analysis, or excuse me, the Nielsen custom analysis to Dr. Gray's custom analysis. Do you recall that?

A Yes, I do.

Q When you refer to Dr. Gray's custom analysis, what exactly is it you're referring to?

A I'm referring to an analysis that's downstream from the work that Nielsen did. We produced quarter hours, estimates of quarter hours of viewing for distant cable

households among individual stations on a quarter hour basis. And down the line from that point in time, program names were affixed to it and the analysis was completed.

And so it was a case of saying in this case the analysis piece would have been further down the line from the work that we were producing.

Q So if you could be more specific, what was the work that Dr. Gray did that you are encompassing in your phrase, "Dr. Gray's analysis"?

MR. OLANIRAN: Objection, Your Honor. I think Mr. Lindstrom is not qualified to testify what Dr. Gray did. If he wants to know what Dr. Gray did he can ask him.

MR. BOYDSTON: He's changed his analysis to say that what he's talking about is Dr. Gray's analysis which certainly implies that he knows something about Dr. Gray's analysis, otherwise why would he say it?

CHIEF JUDGE BARNETT: I'll allow

the question. He used the terminology in his testimony.

THE WITNESS: The piece that the adjustment had been made for was the notation regarding two aspects of zero viewing, one of which was taking out, in fact, the broadcast network; viewing quarter hours that would not have been compensable. We are producing viewing data for all stations for all quarter hours without tying to program name, so that step within the process to take out noncompensable quarter hours would have been done further on and would have been part of -- included within Dr. Gray's analysis. And the same with GN, where comparisons were necessary in order to determine which quarter hours should be included or not having to do with the comparison of the national satellite feed versus the local feed and where there are differences.

BY MR. BOYDSTON:

Q So are you saying that after

Nielsen provided the raw data to Dr. Gray which included things like noncompensable programming, network programming, if you will, that after that, Dr. Gray removed that noncompensable programming from the data set you received from Nielsen and then did something with it?

A We provided our data to the MPAA which was then gone on to Dr. Gray, but it is, in fact, my understanding that that was done in between Nielsen's work on the estimates of the audience and Dr. Gray's final analysis.

Q And how do you know that?

A It is my understanding that that is part of Dr. Gray's analysis.

Q What's the basis for that understanding?

A I cannot speak with full expertise on the details of Dr. Gray's analysis, so --

Q Well, do you know if it was Dr. Gray who did that or some other person?

A I only know that it was done

further downstream from the work that we were doing.

Q And how do you know that?

A Because we didn't do it.

Q Well, how do you know it was done in the first place then?

A It is my understanding that it's done. I couldn't sit and tell you the details of how I know that.

Q Well, you say that you know it, something must have made you know it?

A I would say that -- I may have overstepped my statement in too strong a way. And in fact, I would requalify that as saying I, in fact, have -- I have no positive confirmation to say one way or another that it was done. I only can speak to the data set that we provided which is again, the estimates of the audience on a distant cable basis on a station by station.

Q I'm sorry, I beg your pardon. The data set you produced did include

noncompensable programming, correct?

A It would because we wouldn't have gone through to identify the program level data. It has to be done once the program schedules are affixed.

Q And noncompensable programming includes, for instance, network programming, correct?

A I'm probably best not commenting on that because I didn't get involved with that aspect of it.

Q Well, are you aware as to whether or not network programming is compensable in these matters?

A I am aware, but not to the extent of being able to answer on details on it. To a certain extent, you could almost go into a speculation mode. It doesn't affect what we produced and as I said, I may have made a stronger statement before than perhaps I should have.

Q Now you said yesterday in your

testimony that zero viewing is a misnomer in the sense that when Nielsen data shows zero viewing Nielsen isn't really saying no one is watching, correct?

A Other than for analysis purposes where we're putting numeric fields in, Nielsen doesn't show zero viewing.

Q But I think your point was and forgive me if I'm wrong, but your words yesterday I believe were just because you have something that shows no viewing under the Nielsen data, doesn't mean that no one is actually watching at that time, correct? It just means that the Nielsen method did not pick that up?

A That the levels would likely have been too small to have found reported viewing. Yes.

Q And again, this may be asking you to be overstepping your bounds and if not, I'm sure you'll avoid that. Isn't it the case that MPAA study accords no value to programs

that have a zero viewing incidence?

A That's not true.

Q And why is that not true?

A Once again, it's important to keep in mind sampling in the way that it works so that during any individual quarter hour you may or may not find viewing in the same way that for any given respondent it might be a yes or a no in terms of have they viewed. You would expect that to occur. But it's only once you only add up all of the aggravated viewing that, in fact, your estimate is accurate.

And so it's a situation that it really is necessary to add up the viewing across time.

Q Yes, but to the extent that the MPAA study accords no royalty rights or no right to actually get paid royalties out of this proceeding to a program that shows up with a zero viewing on the Nielsen data, is it not true that zero viewing in the Nielsen data

translates to no value in these proceedings?

MR. OLANIRAN: Objection, Your Honor. Mr. Lindstrom is not testifying what MPAA's distribution methodology or what MPAA's methodology is in this proceeding. He's testifying to what Nielsen produced to MPAA.

CHIEF JUDGE BARNETT: Sustained. And let's keep our objections to the statement of the legal basis for the objection, please, not a narrative. Objection sustained.

BY MR. BOYDSTON:

Q Do you have an understanding of how the MPAA study accords shares of these royalty pools to individual program suppliers?

A To the extent that my knowledge goes and it is again and a step further downstream than what we do, but it examines programs and examines programs across time and across stations in a very aggravated way.

And under that scenario, instances with multiple stations and multiple time periods coming up with zero viewing are going

to be certainly the exception to that rule. It's why again you have to keep aggregating and a zero for a given quarter hour, as we keep going back to it, zero viewing for a given quarter hour doesn't mean anything. It is only in that aggregation. And to the best of my knowledge of what the MPAA does, I think it's a fair representation of the relative amount of viewing going to those programmings across times and station.

Q Do you think it's a fair and relative representation if the MPAA methodology accords no compensation whatsoever for a program that, in fact, does have viewership?

MR. OLANIRAN: Objection, relevance, Your Honor.

CHIEF JUDGE BARNETT: Sustained.

THE WITNESS: Can you rephrase that?

CHIEF JUDGE BARNETT: You don't have to answer.

THE WITNESS: I'm sorry, I thought you were saying go ahead with it.

CHIEF JUDGE BARNETT: I used to confuse those two all the time myself.

(Laughter.)

BY MR. BOYDSTON:

Q Would you as an expert normally provide relative error rates as part of your report?

A It's actually a difficult question to answer. It's something that will often be provided if it's asked for in terms of syndicated data. It's frequently done. In situations like this one, relative errors are exceedingly complicated because effectively every single program depending on how it's aggregated will have different relative errors. I don't know whether it pays to go into the reasons for that or whether you can accept that as what the situation is, but as a result, trying to calculate out relative errors on a study like this that will

subsequently be aggregated at a later point is exceedingly difficult and cumbersome. If we had a set of numbers that we did, we could produce it, something along these lines, very hard. And they will differ all over the place and need separate calculations for each.

JUDGE STRICKLER: Excuse me, counsel. Can you define that term formally, relative errors?

THE WITNESS: Relative error would be the relationship of the standard error to the number that's being measured. So if we produced a 10 rating, for example, and it had a standard error of 2.5 points, it would be a 25 percent relative error. And so it's a gauge of how tight the fit will be. It's kind of a direct reflection of standard error.

The reason why it differs is that one of the key components in calculating either standard error or relative error over time is how much is coming from unique individuals. So it's not just the sample

size. It's whether there's a correlation of viewing between events. And so the net result is each program will have different correlations or each aggregation will have different correlations and different sample sizes, causing it to again be very difficult.

BY MR. BOYDSTON:

Q You've testified a number of times in these proceedings. I understand going back a significant amount of time.

MR. HARRINGTON: Asked and answered, Your Honor.

MR. BOYDSTON: There's a little more to it.

BY MR. BOYDSTON:

Q Have you ever testified on behalf of Settling Devotional Claimants?

A I actually don't recall. I've done so many of these. I don't remember as people have gone in and out of these situations. I'm also a little bit unclear on exactly what the question is asking.

Q Sorry about that. What I was asking is have you ever testified in these proceedings or proceedings before the CARP or before its predecessor the CRT on behalf of Settling Devotional Claimants prior to now?

A Again, I can't remember off the top of my head whether I have specifically done it. I have certainly been cross examined by the devotionals. I know that.

(Laughter.)

Q Have you testified on behalf of anyone other than the MPAA in these proceedings?

A Again, I don't recall. I have done work for other claimants. I do not recall whether I was specifically called for those studies independent of the work that I've done with the MPAA. But we are fundamentally Nielsen is a fence-sitter, although I'm testifying for the MPAA. I'm here to testify about what we did and we can and have done work for other claimant parties.

Q Nothing further.

CHIEF JUDGE BARNETT: Mr. Harrington?

MR. HARRINGTON: Yes, Your Honor, just one or two questions.

CROSS EXAMINATION

BY MR. HARRINGTON:

Q Mr. Lindstrom, in your experience reviewing viewing data, have you found that viewing is constant across a 24-hour day or does it change from quarter hour to quarter hour? Let's assume national aggregate numbers.

A Change in which way, if you could just --

Q So do the same number of people watch television generally, all programs at say six in the morning or six in the afternoon?

A No, it changes throughout the course of the day.

Q It does. And are -- how would you

-- would you say that viewing during the hours of say 2 a.m. or 6 a.m. are relatively low as compared to other hours during the day?

A They tend to be relatively low, yes.

Q And based upon your experience in doing this for many years, am I correct that starting at the hour of 2 a.m. viewing is quite low and then at some point say at about 5 o'clock it builds up again and that the lowest viewing level would be what, 2:30, 3:00 o'clock in the morning?

A It tends to be in that type of neighborhood, but I couldn't give you the specifics.

Q Okay, so if someone took the viewing levels nationally at 1:30 a.m. and drew a linear interpolation and reduced it each quarter hour until, or half hour, until 6:30 a.m., so that the lowest viewing levels are at 6 a.m., would that be a fair way to do that?

A I would tend not to do linear relationships in terms of television viewing overall.

Q Thank you very much. That's all I have.

CHIEF JUDGE BARNETT: Mr. Olaniran?

REDIRECT EXAMINATION

BY MR. OLANIRAN:

Q Good morning, Mr. Lindstrom. Greg Olaniran for MPAA. I just have a couple of very quick questions.

Just so we're clear, this zero viewing idea we're talking about, when you're looking at a particular station on a particular date at a particular quarter hour and the specific households that are viewing that station, is that your understanding of what the zero viewing instances are?

A They're instances of particular stations, particular households, particular days and particular quarter hours, yes.

Q And you spoke --
A And if I could add on, and particular weeks.
Q Okay.
A So that it's not an instance of Monday at 8 across all weeks. It's Monday at 8 on February 2nd.
Q Thank you. You spoke in terms of fragmentation as probably accounting for the difference between say the incidence of zero viewing in some prior years versus say when you compare those prior years to say the period from 2002 to 2003. What do you mean by fragmentation in the marketplace? Are you talking in terms of programming?
A It was mainly meant to be a reflection of saying that television usage for individual stations has declined over time and has declined considerably for individual viewing sources. And part of the reason for that HUT levels are tending to be about the same meaning the number of people using

television is about the same, but the individual stations have gone down. And the most likely scenario for that is simply there are more stations. Cable systems have more channels. There are more channels that are available. And so the viewing is getting divided up to a greater extent. And so a situation with more zero cells as one piece of what could cause that would be simply saying viewing is declining for individual stations overall, so it's not surprising it would occur here.

CHIEF JUDGE BARNETT: May I inquire?

MR. OLANIRAN: Oh, sure.

CHIEF JUDGE BARNETT: Mr. Lindstrom, is there any way that Nielsen measures Netflix streaming or Hulu or any of those other sources of TV light time?

THE WITNESS: We're doing that now. That's all part of the way that the measurement system has changed. It's actually

some of the streaming sources of video have been causing the biggest headaches in the business right now, but we have gotten to a point at this point where we're now beginning to include PC usage. We're beginning to include on-demand. It doesn't have to be viewed simultaneously. And our measuring services like Netflix and Hulu to be able to track. It's a very big component for the industry, but also very hard as you can imagine.

CHIEF JUDGE BARNETT: But for the period relevant to this case, there was no consideration of DVD usage? I guess that was the in technology at that point or videotapes or any other -- when the TV was on and the source of the signal was something other than cable or broadcast?

THE WITNESS: It would not be included. So it's not part of the overall television usage. If there were degrees of more DVD viewing, it would end up showing

declines in traditional television usage.

But those are not -- they're reflected in the numbers that we're producing, but they're not included them if that makes sense.

CHIEF JUDGE BARNETT: Okay.

THE WITNESS: They would impact, you'd see those impacts, but not specifically included.

CHIEF JUDGE BARNETT: Thank you.

BY MR. OLANIRAN:

Q Your general point seems to be that in addition to more stations, let's say, these additional media services are necessarily competing with broadcast stations and that could account for some of the lower numbers for the broadcast stations. Is that a fair statement?
A It's a fair statement that there's been a considerable degree of competition that has come on, you know, through the years and to the extent that it was occurring during the

period of this study, I couldn't say, but it has, in fact, been an ongoing change within the marketplace since probably the '80s.

Q Thank you. No further questions, Your Honor.

JUDGE FEDER: Going back to Judge Barnett's question, similarly, is there anything in these data that reflect DVR usage, delayed viewing of broadcast programming using a DVR?

THE WITNESS: DVRs at that point in time were very small and wouldn't have been a significant player. We would have included videotaping, if there was playback, but it would only be included if it had occurred during the week in question. Remember, somebody is only keeping this diary for a week's time. So effectively, there would be some degree of taping that would occur that would not have been in here. I don't want to say that it was reflecting all of that. I think it's probably a more accurate way to

think about it as being live viewing.

JUDGE FEDER: Thank you.

CHIEF JUDGE BARNETT: Do the questions from the bench raise questions for counsel?

MR. BOYDSTON: Yes, but I also have a question to follow up on the redirect.

CHIEF JUDGE BARNETT: All right.

RECROSS EXAMINATION

BY MR. BOYDSTON:

Q Mr. Lindstrom, I wanted to ask you about fragmentation which Mr. Olaniran asked you about. To lay a foundation for that though I need to ask a question. I've known Nielsen to be around for as long as I know, but why don't you give me a better answer or better information than that. How long has Nielsen been doing this -- been in this business of TV ratings?

A It goes back into the '50s and they've been in the market research business before that.

Q Okay, and when in the 1950s, that's a whole decade, but to the extent we can collectivize it, from what I know there were three national networks, correct, and then there were independent stations around the country. Is that a fair explanation of the TV landscape at that time?

A I couldn't tell you the exact number of networks. They've kind of come and gone and gone in and out of business, but it certainly has been a reasonable definition of what the marketplace looked like many years ago.

Q Okay, and my questions on this are certainly questions for an expert because this is something that I don't think anyone else here perhaps knows and that's why I'm asking you. In terms of fragmentation, fragmentation was there much fragmentation from say the dawn of the TV era in the '50s to the 1960s or was that fairly constant, if you know?

A Actually, could you restate that?

I'm sorry.

Q Sure. Were the number of TV stations in the United States, did they increase appreciably between the 1950s and the 1960s? I'll make it more specific, say between 1965 and 1969? Was there a significant increase in stations?

A I couldn't tell you.

Q At some point was there a significant increase in stations over the station landscape from the 1950s?

A Again, I am not an expert on historical television. I've got a pretty good idea on what was going on from '78 when I joined Nielsen on, but prior to that I couldn't answer definitively.

Q Was there an increase in TV stations from say 1978 to 1990 that was noticeable or significant?

A There would have been an increase both in terms of stations and cable sources of programming.

Q Do you have an estimate as to what sort of percentage growth there was during that time period?

A I couldn't tell you.

Q How about the difference in the number of stations and cable systems or cable channels rather from when you started in 1978 and say 2000, was there an appreciable change or increase?

A There would be an appreciable change, but I couldn't dimension the size of it. Cable systems went from 20 channels being a big one to 100 channels being a small one. The distribution technologies and the programming to fill it has grown extremely rapidly.

Q And what I'm trying to get a handle on is when that growth occurred. Your testimony in response to Mr. Olaniran's question was there's been a huge increase in the number of stations and that's decreased viewership on them all, correct? That was

your testimony to Mr. Olaniran's question, correct?

A My answer to why you might find an increase in zero viewing was that there has been increases in fragmentation, but to the degree to be able to give specific growth numbers, I couldn't do offhand to say it occurred in 1988 or whatever the period of time was. It's just there has been a general flow from 1978 when I began working at Nielsen. There was three networks. The three network share was 90 and a program was canceled if it didn't have a 30 share. And nowadays if somebody got a 30 share, that would be a super event. And it has been a continuum based upon, as I said, ease of distribution, digital, as the technology simple growth in cable. Cable penetration has gone from 25 percent during that period of time up to 90, all of which leads to increases in channels. So it's not a clear cut case of going the number of broadcast stations has

increased. It's going at that point in time 25 percent of people had increases in channels because of cable and now it's become virtually ubiquitous.

So there's a lot of factors at play, but there's no question the average number of channels that people can receive has gone up and gone up considerably.

Q And to that point you used a particular metric. You said when you started out if a network program didn't get a 30 share, it might be canceled. How would you characterize that situation today? What's the -- I know it's a generalization, but how do you generalize that figure today? What does a network program have to get to avoid cancellation as a general matter?

A Again, it varies all over the place, but for a variety of reasons. It is substantially lower than that. It's in the teens at this point in time, can still be considered a healthy number.

Q My follow up to Judge Feder's question was how -- he asked about DVR viewing and I was curious with regard to the Nielsen meter, how does a Nielsen meter, does a Nielsen meter detect and take note of and record a DVR event?

A It does now. It didn't during the time in question in the early 20002.

Q Thank you. Nothing further.

CHIEF JUDGE BARNETT: Mr. Harrington?

MR. HARRINGTON: Just one question?

CHIEF JUDGE BARNETT: You may.

RECROSS EXAMINATION

BY MR. HARRINGTON:

Q Mr. Lindstrom, we've used a couple of different terms here. We talked about ratings and about shares and you talked about a 1 rating was good and now an 18 share is good. Could you explain for the record the difference between a rating point and share?

A Sure. A rating is a percentage of a universe that was watching something, so let's say that there's 100 million households in the United States as a very rough number. If 10 million were watching a particular programming during the average minute, it would be 10 million divided by 100 million or 10 percent. That's a 10 rating. It's the percentage of the universe that would be viewing it.

A share is really looked at -- and that's an absolute level. A share is a relative one in order to see how you're doing competitively. So taking that same example, if the percentage of people which is the HUT level, Households Using Television, I shouldn't say percentage of people, but percentage of households, was 50, 50 percent of them were viewing during the period in question, and you had 10 percent that were tuned to your channel, it's 10 divided by 50 or 20 share. So in that scenario, you would

have a 10 rating and a 20 share.

Q Thank you.

CHIEF JUDGE BARNETT: Thank you, Mr. Lindstrom. You may be excused.

THE WITNESS: Thank you.

(The witness was excused.)

CHIEF JUDGE BARNETT: Mr. Olaniran.

MR. OLANIRAN: We will call Dr. Jeffrey Gray.

WHEREUPON,

DR. JEFFREY GRAY

WAS CALLED FOR EXAMINATION BY COUNSEL FOR THE MOTION PICTURE ASSOCIATION OF AMERICA AND, HAVING FIRST BEEN DULY SWORN, WAS EXAMINED AND TESTIFIED AS FOLLOWS:

MR. OLANIRAN: May I proceed, Your Honor?

CHIEF JUDGE BARNETT: Yes, you may.

MR. OLANIRAN: Thank you.

DIRECT EXAMINATION

BY MR. OLANIRAN:

Q Good morning, Dr. Gray. My name is Greg Olaniran and I'm counsel for MPAA. Would you please state your name for the record and spell it?

A Yes, it's Jeffrey Gray, J-E-F-F-R-E-Y G-R-A-Y.

Q And what is your educational background?

A I have a Ph.D. in Economics from the University of Pennsylvania and also an undergraduate degree in Economics from the University of California at Santa Cruz.

Q Where do you work?

A I work at Deloitte Financial Advisory Services, LLP.

Q And what position do you currently hold at Deloitte?

A I'm a principal and also the national leader of their Economic and Statistical Consulting Group.

Q And what are your responsibilities

in that position?

A Well, I have various administrative responsibilities including hiring into the group, setting compensation, overseeing staffing levels, representing the group in leadership functions and meetings. But my primary responsibility really is client service which is providing economic and statistical consulting services to companies, government agencies and sometimes indirectly via law firms.

Q And where were you prior to Deloitte?

A Well, prior -- I should say I started at Deloitte in 2002, but then from 2006 in the summer through 2009, I left Deloitte and was with Huron Consulting Group.

Q Prior to your first stint at Deloitte, would you please provide with a sense of your work experience at all of the other places, where you worked over the last several years?

A Sure. I worked for both large and small economic consulting shops. I also spent a year at the White House, the President's Council of Economic Advisors.

Q And describe briefly the subject matter of your specialty.

A Sure. In general, I focus on understanding and studying markets, how prices and quantities are determined in those markets and how market imperfections or distortions affect those equilibrium prices and quantities. I would say my specialty is analyzing data associated with those markets, often large amounts of data, to draw conclusions regarding those alleged or actual imperfections and distortions.

Q And what are the specific fields in terms of -- how would you define those different fields?

A I would say economics, statistics, and econometrics.

Q What is the distinction among --

how do you distinguish between -- among those three fields?

A Good question. I would say economics is the study of the sort of production, allocation, and consumption of goods and services, very broadly speaking.

Statistics, also broadly speaking, is the study of the collection, analysis, and the interpretation of data.

Econometrics is the intersection of those two disciplines. It's the application of statistical methods to economic data to provide content to economic relationships being studied.

Q And how long have you worked in these fields?

A Approximately 25 years.

Q Have you taught also in these fields?

A Yes.

Q And where did you teach?

A I taught at the University of

Illinois at Urbana-Champaign. I was a tenured track assistant professor there. I also taught while I was a grad student at the University of Pennsylvania. I taught at the University of Pennsylvania as well as co-taught a course in the Business School there called Wharton.

Q Are you published?

A Yes.

Q In what areas?

A I've been published in peer-reviewed journals in the sort of general area applied microeconomics with a special focus on labor economics.

Q And have you served as a referee for peer-reviewed journals?

A Yes. Throughout my career, I've been asked to serve as a referee to judge the appropriate use of economics and statistics when people submit publications.

Q Do you have any experience in media and entertainment industry?

A Some consulting experience. I've done work on behalf of large metropolitan newspapers. I was also engaged by outside counsel for a performance rights organization, also known as a PRO to assess the economic value of a blanket license, giving certain companies the right to perform music from the PRO's library on their internet sites.

Q Have you done any work related to cable television industry?

A Yes. I've also been engaged by outside counsels for CSOs who have been involved in I guess either negotiations and/or contract disputes with basic cable channels concerning the programming on those channels, how that programming has changed over time, and the associated viewership of those programs and channels.

Q And have you previously testified either before this body, the CARP, the CRT, or any other Court or regulatory body?

A I have not testified before this

body, but I've testified before both international and Federal Courts in the United States, both written and orally.

MR. OLANIRAN: Your Honor, at this point, I'd like to offer Dr. Gray as an expert in the field of economics, statistics, and econometrics?

MR. BOYDSTON: No objection.

MR. HARRINGTON: No objection.

CHIEF JUDGE BARNETT: Dr. Gray is so qualified.

BY MR. OLANIRAN:

Q Dr. Gray, what were you asked to do in this proceeding?

A Yes, I was asked to propose an allocation methodology of the cable royalty funds attributable to the program suppliers category between 2000 and 2003, between IPG represented claimants and MPAA represented claimants.

I was also asked to review the methodology proposed by IPG and its associated

allocations to see if it was reliable.

Q And did you prepare written reports as to your findings?

A Yes, I did.

MR. OLANIRAN: May I approach the witness, Your Honor?

CHIEF JUDGE BARNETT: You may.

BY MR. OLANIRAN:

Q Dr. Gray, I have just handed you MPAA Exhibits premarked as MPAA Exhibits 364 and 365. Would you please identify those two exhibits?

(Whereupon, the above-referred to documents were marked as Exhibits 364 and 365 for identification.)

A Yes, Exhibit 364 is the testimony of Jeffrey S. Gray, Ph.D., amended August 20, 2012. Exhibit 365 is the rebuttal testimony of Jeffrey S. Gray, Ph.D., May 15, 2013.

Q Did you prepare these exhibits yourself?

A Yes, I did. Either I prepared

them or directly supervised some of the appendices.

Q And do you have any corrections or additions to either of the exhibits?

A Yes, I have two, on two pages of the amended testimony. The first is on page 15, the first full paragraph, it says during the four, quote, sweeps, unquote, months. This refers to the Nielsen diary data. There were actually six months data in the Nielsen diary data. And so for expositional purposes I'd change the four to a six.

And on the very next page, page 16, two similar changes and this is a carry-over from my first testimony before I had information concern IPG claimants. It's the second line. It starts off in the first line, "for each time slot in the Nielsen diary data I merged program title information for MPAA-represented programs." It should now read "for MPAA and IPG-represented programs."

And similarly a little bit further

down in the paragraph where I say "MPAA programs, I was provided Tribune data that included information on MPAA program titles." It should say "MPAA and IPG proceeding titles by station." Those are the only corrections.

Q And with those corrections, do you declare MPAA Exhibits 364 and 365 to be true and correct and of your personal knowledge?

A To the best of my ability, yes.

MR. OLANIRAN: Move for admission of -- Your Honor, I move for admission of MPAA 364 and 365.

MR. BOYDSTON: No objection.

MR. HARRINGTON: No objection.

CHIEF JUDGE BARNETT: 364 and 365 are admitted.

(The documents, having been marked previously for identification as 364 and 365, were received in evidence.)

BY MR. OLANIRAN:

Q Dr. Gray, again, what do you

understand to be the purpose of this proceeding?

A It's to determine an allocation of the cable royalty funds from 2000 through 2003 for the program supplier categories between MPAA and IPG representing claimants.

Q And what is your source of the understanding, I mean what is your understanding of the source of these royalties?

A I understand the royalty funds follow from the Section 11 of the compulsory license established by Section 11, I'm sorry 111, of the 1976 Copyright Act.

Q And in general, who are the beneficiaries of these royalties?

A Well, the copyright owners of the compensable programs.

Q What did you do to prepare for the task that you were charged with?

A Well, in general, I reviewed a lot of testimony. To do the actual analysis, I

reviewed a lot of prior decisions for many years. I reviewed prior testimony, both written and orally in prior testimony, and reviewed some various textbooks and such.

Q And did you reach any conclusions as to what standard the Judges should employ in allocating royalties between MPAA-represented claimants and IPG-represented claimants?

A Yes, the relative market value.

Q And from an economist's perspective, what is your definition of market value and you can tell me what you mean by relative market value?

A Sure. Market value from an economist's perspective is the price at which an asset changes hands between a willing buyer and a willing seller, neither being under any compulsion to trade an both having full information. Relative market value then would be quite frankly the relative market value, the market value of two assets compared to one

another.

Q And what, in your opinion, would be an appropriate measure of relative market value in the context of this Phase II proceeding?

A For the Phase II proceedings program viewership provides a reasonable and directly measurable measure of relative market value.

Q And why is that?

A Well, first and foremost, in these proceedings, we're dealing with relatively homogenous programming, both IPG and MPAA have syndicated programming, movies, and specials. So to determine the -- albeit MPAA has quite a bit more of it, but to determine the relative market value what's going to be important from the CSO's perspective ultimately is going to be the underlying subscriber demand of these homogeneous products which is best reflected by the relative viewing.

Q What's CSO just for the record?

A I'm sorry, cable system operator.

Q Thank you.

A But secondly, I should also say I did check statistically whether or not IPG's programming mix somehow led to either a slower or faster growth in the subscribers for CSOs and with the data that I had available, I did not find a statistically-significant relationship. So for those two reasons, it seems the relative program viewership provides a very, again, measurable and reasonable measure of relative market value.

Q So you did go on to perform an analysis of program viewership?

A Yes, I did.

Q And describe generally what steps you undertook in doing that analysis?

A Well, first, it was -- I should take a step back and talk about the five data sources I relied upon. The first step, which is a big step is combining five data sets. At

the first data source is data from the Data Cable Corporation or CDC data. The CDC data is information concerning the -- from all CSOs who, in the United States, who distantly retransmit signals of information on the signals they distantly retransmit as well as the total number of distant subscribers of those signals. So that's the first data source, the CDC data.

From the CDC data, two samples are drawn. And these will generate two additional data sources. The first sample was designed by Marsha Kessler of MPAA and she provided that to Nielsen who generated and provided the Nielsen diary data which then contains information on distant viewing for those particular stations during sweeps months. So this is 6 months a year, 24 hours a day, 7 days a week.

The second sample from the CDC data I designed which was a random sample, a representative sample, designed to be

proportionate to the number of distance subscribers, but it's representative. I provided of approximately 120 stations per year from 2000 through 2003, provided that sample, that list of stations to Nielsen who provided now a third data set which is the Nielsen ratings data. So for those nationally representative stations, it's information on local ratings provided on a quarter hour basis or 24 hours a day, 7 days a week, and importantly, 12 months a year. So that's data source number three.

Data source number four is going to be the Tribune Media data, Tribune Media Services. The Tribune data is essentially a wealth of programming information for every broadcast on those stations. That is the stations in the Kessler sample and stations in the Gray sample. The wealth of information includes exactly when the broadcast started, how long the broadcast was, the duration, information on the type of broadcast it was,

information on the station, whether or not the station was an affiliate, information on what else? It could be if it was a movie, the director of the movie, the actors, major actors in it and so forth. That's data set number four.

One more which is the Reznick Group data analysis. And they provided two lists. One was a list of MPAA compensable programming, based upon start time, date and station, and they provided the same for IPG, start time, date and station.

And those five data sources now, I combined together for my analysis.

MR. OLANIRAN: You have a question?

JUDGE STRICKLER: Yes, thank you, counsel.

Dr. Gray, you mentioned the random sampling that you did of the 120 distantly retransmitted stations. And you had mentioned, I think it was in a footnote that

that was a stratified random sample. Can you explain how you stratified this sample and why you did that?

THE WITNESS: Sure. I stratified it based upon the number of distant subscribers, so created buckets. And the reason why I did it is quite frankly I wanted to make sure that the stations were drawn to get a good representative of the population, as well as to get, you know, a good number of stations from each type -- good number of CSOs for each type, that is CSOs who retransmit small stations, small programs as well as the stations -- and large.

JUDGE STRICKLER: If you had not stratified would you have gotten more CSOs that were of the smaller type?

THE WITNESS: Yes.

JUDGE STRICKLER: Thank you.

BY MR. OLANIRAN:

Q I just had one quick question about the data set. As to program titles,

which data set did they come from? Did they come from the Nielsen data set or did they come from the Tribune data set?

A Program titles, yes, that's amongst the wealth of the information in the Tribune data set. There was no program title information in the Nielsen data.

JUDGE STRICKLER: Excuse me, counsel, one more question.

MR. OLANIRAN: Sure.

JUDGE STRICKLER: You also mentioned among the various data sources was Ms. Kessler's sample of stations and as far as we understand it, her sampling was not a random sample. It was purposeful sample. Do you have any problems with using her sample of stations in light of the fact that it wasn't random?

THE WITNESS: I should say I have concerns associated that I dealt with empirically.

JUDGE STRICKLER: Let me ask you

first, what were the concerns?

THE WITNESS: The concerns is that it was not random. And when you don't have a random sample you can't make any inferences concerning stations, for example, outside the sample. And so actually at the outset I should say, counsel asked if I could use the Kessler analysis for my analysis at large and I said I could not for that reason. So that's the, I guess, main motivation for my random sample.

You had a follow up?

JUDGE STRICKLER: No, I'm nodding because I understand what you're saying.

THE WITNESS: Okay. And so what I wind up doing is I'll talk about momentarily is estimate the relationship between factors in my random sample and the Kessler sample. And the concern I wind up having, of course, is that still the Kessler sample is focused on larger CSOs. So the questions that I had is to make sure that there's not something about

the relationship.

I'm getting sort of off my plan description, but there's not something different about the relationship between distant viewing and local stations -- I'm sorry, distant viewing and local ratings for large stations and small stations. If there is, then I'd start feeling queasy. So I made sure to check that. But ultimately, all of my calculations of viewing, program viewing is done for the representative samples.

Kessler samples are just used to make projections.

JUDGE STRICKLER: Could you have eliminated your queasiness, to use your word, simply by not using the Kessler sampling at all and just gone with your own sample?

THE WITNESS: First, my queasiness was quelled. But secondly, I needed information on distant viewing. And that's not available in the local ratings data.

JUDGE STRICKLER: You continued to

use the Kessler data and you think you corrected for it empirically, even though that was your own source of distant ratings?

THE WITNESS: Correct. Yes, distant viewing, yes, correct.

JUDGE STRICKLER: Distant viewing and therefore distant rating?

THE WITNESS: Correct, yes, agree. But in order to get distant rating, I had to combine that with the CDC data, but yes, Your Honor.

JUDGE STRICKLER: Thank you. Please proceed, counsel.

JUDGE FEDER: Counsel, if I may? Earlier in your testimony, Dr. Gray, you spoke of the programs in this category being fairly homogenous. Could you explain that a little bit?

In particular, because we have testimony that there's really a broad range of different types of programs in this category from game shows to motion pictures to

situation comedies, etcetera. And what the implication is of the content being relatively homogenous as you describe it.

THE WITNESS: Very good question. One is I think the program types and you're right, there are a variety of program types. It's those that wind up being critically important in understanding distant viewing because distant viewing varies by program type quite substantially.

So what I meant by homogeneity is from a CSO's perspective in terms of attracting and retaining customers, from a Phase 1 perspective it makes sense that they would want an eclectic group of sports programming and program suppliers' programming, devotional, etcetera. But once they have sort of a mix of program supplier categories, it makes sense to me as an economist that they care more about okay, who -- who is watching it, therefore that shows me how valuable it is.

And ultimately, I take care of the who's watching it in terms of the type of programming. So if it's some show like actually instructional program supplier programming, winds up having very low ratings and viewership whereas movies has relatively higher, I take into consideration both those factors when estimating distant viewing. So ultimately they will -- I take into account that they care about distant viewing as a measure.

Is that somewhat circular? Does that answer your question?

JUDGE FEDER: It is approaching that. One other question that I have is when you're talking about viewing, to what extent are factors like displacement relevant? If you have essentially the viewing public going after two very similar shows on a CSO system and essentially you're kind of dividing up that same viewing audience?

THE WITNESS: Right, displacement.

A new program will come and might get similar ratings or viewing to that program that it displaced and so that perhaps put a little bit noise around quote unquote true value, but then you would expect if it's a program of lesser quality or popularity, you'd expect the viewership to decrease over time so that our measurement of viewership for that new program, relatively to the displaced one should -- will approach its true measured value over time.

JUDGE FEDER: Thank you.

BY MR. OLANIRAN:

Q Dr. Gray, let's talk about specifically about the analysis that you did with respect to viewership. What methodological approach did you take with respect your viewing analysis?

CHIEF JUDGE BARNETT: Mr. Olaniran, it sounds like we might be changing gears right here and this might be a good time for us to take our morning recess, so we will

do that.

MR. OLANIRAN: Sounds good, Your Honor.

CHIEF JUDGE BARNETT: Fifteen minutes.

(Whereupon, the proceedings in the went off the record at 10:40 a.m. and went back on the record at 11:04 a.m.)

CHIEF JUDGE BARNETT: Please be seated.

Apologies our recess lasted a bit longer than we planned. Judge Strickler was cheating at hopscotch.

(Laughter.)

Mr. Olaniran?

MR. OLANIRAN: Thank you, Your Honor.

CHIEF JUDGE BARNETT: And we can run a little longer into the noon hour to make up.

MR. OLANIRAN: I do appreciate the extra time. After all, Dr. Gray is an

econometrician, so I'm not sure how much fun it is to listen to him.

BY MR. OLANIRAN:

Q Dr. Gray, just before we took the break, we were about to get into the specifics of the viewership analysis that you undertook. And I think I had asked you about a methodological approach that you took towards the analysis.

A Yes.

Q What was your methodological approach to viewership analysis?

A It was regression analysis.

Q Okay. And let's start with the fundamentals. What is a regression analysis?

A Well, regression analysis is actually a family of statistical tools that are used to calculate the relationship among variables. It calculates how each of a set of independent factors affects the outcome variable of interest, sometimes called the dependent variable.

So it's used to predict expected value of an outcome variable given certain levels of these input factors.

Q Okay. And is this a tool that is commonly used in statistics and econometrics?

A Oh, yes. It's commonly used, widely accepted over 300 years now. It dates back to Gauss.

Q And why is a regression analysis appropriate for your viewership analysis?

A Well, regression analysis is used to predict the value of a variable, so economists use it to predict the value of a variable when it's unknown. That's what we have in this case with respect to distant viewing in many instances.

For the non-sweeps periods, which is six months a year, while we have lots of information, we don't have -- concerning programming, we don't have any information concerning distant viewing of that programming from the Nielsen diary data.

Actually, also, during the sweeps months, for certain stations, for programming on those stations, we don't have information regarding viewing. Specifically, stations that were in my random sample, but not in the sort of Kessler diary data sample, have information about the programming but not distant viewing.

So for those two sort of classes of time and stations, we will use regression analysis to predict what distant viewing is. And there is actually a third set, which is subtle but a very powerful advantage of regression analysis. Even for those programmings -- programs where we know or we have information on distant viewing from the Nielsen diary data, that tends to be based upon relatively small samples.

But with regression analysis, what we are able to do is use all of this Nielsen diary data in its aggregate and calculate what distant viewing is expected to be based upon

this large amount of data. And so even in those instances where we have sort of diary data on distant viewing, we can predict what distant viewing is likely to be based upon the regression analysis.

So it is a wonderfully powerful and useful tool in this instance. And after it we have predictions for distant viewing for every single program, actually on a quarter-hour basis, for seven days a week, 24 hours a day, 12 months a year.

Q Okay. And you had identified five data sets a moment ago. Could you describe procedurally how you arrived -- and taking us through the use of the data sets, performing the analysis, and your end result. How did you use the data sets? What was the process?

A Sure. Well, the first thing I did -- and this was a long while ago -- is I wanted to establish that there was a statistically significant relationship between local ratings and distant viewing.

Q And why did you do that?

A Well, ultimately I did that because we did not have information on distant viewing, as I said, for half the year, and even during sweeps periods for many stations. So my goal ultimately was to predict what distant viewing is expected to be based upon local ratings and other information, but I wanted to establish that that relationship did indeed exist.

Q Did you find the relationship to exist?

A I did, but the -- and the way I did it is I combined sort of three data sets, three of the five that I just mentioned. So the local ratings data, and based upon my random sample; the diary data based upon the Kessler sample; and then also the CDC data with information concerning the number of distant subscribers.

So those three data sets combined sort of on a quarter-hour basis yields

approximately 70 stations per year that are in common. In the year 2000, a little less than 70; in the years 2001 through 2003, more than 70. But on average, a little more than 70 per year.

So for those stations and those programming -- I'm sorry -- I have about 1.6, or more than 1.6 million quarter-hour observations of programming, or I have local ratings, distant subscribers, and distant viewing.

So I looked at the relationship between distant viewing and local ratings, holding constant the number of distant subscribers. Mathematically, that is really looking at distant ratings and local ratings. And when I looked at that relationship, I found a positive and strong statistically significant relationship between distant viewing and local ratings.

Q Okay. We'll get back to that in a second, but I just wanted to be clear, when

you referred to 70 stations, the 70-station analysis was just for the correlation, not the ultimate allocation, correct?

A That's correct.

Q Okay. And so after you undertook the correlation analysis, what was the next step in your process?

A Well, the next step is to build the full econometric model, and that's combined in the two additional data sets that I described before, the Tribune data -- and also I guess the Reznick analysis of the Tribune data.

So when I combine all five data sets, what I have is information on distant viewing, local ratings, number of distant subscribers, program type, the quarter-hour of the day that the broadcast took place, station affiliation, and other factors that are mentioned in my testimony.

And so then I estimated the mathematical relationship between distant

viewing in those factors I just mentioned. And then, after that established that mathematical relationship based upon 1.6 million observations. I predicted it out to all of the other observations in the entire sample, so that I wound up having information on predicted distant viewing for every single quarter-hour, for every single program, 24 hours a day, seven days a week, 12 months a year, for all four years.

Q And that then became the basis for the shares that you proposed for allocation between MPAA-represented claimants and IPG-represented claimants?

A Yes. So that will be for the 120 randomly selected stations I have valid programming -- program viewing measures. Add those all up for the MPAA-represented titles, add them all up for the IPG-represented titles, and calculated the ratio to get program viewing, and then, therefore, recommended royalty allocation.

Q It's for 365 days, 24/7?
A 365/24/7, 120 randomly selected stations. Yes, sir.
Q Now, after completing your regression analysis, are there any tools -- strike that. Are there any tools that economists or econometricians use to test, essentially, the robustness, if you will, of your analytical approach?
A Well, regressions often are associated with various statistical tests to check their -- you know, their specification in terms of, you know, the goodness-of-fit test, for example, in terms of the t-statistics or z-statistics, depending on the specification, testing the statistical significance of each independent variable.
If I use too much jargon, wave your hand or just let me see your glossed eyes. I apologize. But those tests are continued in the log files that I turned over to IPG. But in addition to that, there were

a whole host of different regressions I ran, quite frankly, to see how robust the results were to changing things like excluding certain stations and/or changing specification.
And ultimately -- Judge Strickler asked earlier about the Kessler sample, so one set of tests that I did is I sort of used permutations of the Kessler sample to rely upon it, so just use, for example, the lower quartile of Kessler's stations in terms of the number of distant subscribers and rerun the results to see how the allocations would change. I did that with upper quartile, middle quartile, et cetera.
The one thing that stuck out was WGN. WGN was just, quite frankly, a little oddball in terms of the relationship between the number of distant viewers and local ratings. So, as a result, I wound up running two separate regressions, one for WGN and one for every other distantly retransmitted station.

And then, within each of these distantly retransmitted stations, again, the estimates were robust across the different quartiles. And that gave me sort of comfort, if you will, that the Kessler non-random sample might have been perturbing my results. I'm confident that it is not.
Q Okay. And with respect to the regression analysis as a whole, were you able to satisfy yourself that your regression analysis was robust enough?
A Yeah. I don't know if it's surprising, but there is -- it seems like there is nothing I could do to change the allocation shares by much other than move claimants around.
Q Okay. Did you make any other comparisons between -- of IPG-claimed programs and MPAA-claimed programs?
A Yes, I did.
Q And what were those?
A I also looked at the number of

unique transmissions of IPG and MPAA-represented programming, the number of retransmissions, as well as the total volume of those programs; that is, the number of minutes broadcast or retransmitted.
Q And were these analyses helpful in any way?
A Well, I suppose the CSOs' preferences are revealed by which stations they choose to digitally -- they choose to retransmit, excuse me, distantly, and how many they choose to retransmit distantly.
So those three measures provide I guess measures of what the CSOs are effectively purchasing, and so each of those provide a progressively better measure of relative value with program viewership, quite frankly, being better than those three.
Q Okay.
A But they do provide, if you will, a rough signpost of how good our measure is.
Q So you are not -- are you

suggesting that these additional analyses could be looked at independent of the regression results, or are they --

A No. They can certainly be looked at as independent of regression results because they are independent of the regression results. But what they do is they provide another measure of relative value, which I think are inferior to those that came out of the regression results.

But I think they are valuable insofar as they provide I guess a benchmark for what CSOs might care about.

Q And are the results of all of these analyses reflected in your testimony, your direct testimony?

A They are.

Q And could you please take us through --

A They start on page 22 --

Q -- the analysis?

A -- of my direct.

Q Okay.

A Chart 1, Panel A just reports the number of unique programs aired by representation. The blue bar, which is the taller bar if you are color-blind, is for MPAA-represented programs, the number of unique programs aired by year. And the shorter green bar is IPG-claimed programming. And you'll see roughly -- those were a 15 or 14 to one ratio by year between MPAA and IPG unique programs.

The second panel then takes the number of unique programs aired and says, "Oh, yeah. How many times are they retransmitted?" Presumably, the more valuable programs will be retransmitted more often, all else equal, and the ratio becomes even starker, between 570- and 618- or 619,000 retransmissions for MPAA-represented programming, and -- what is this -- between about 8,000 and 21,000 for IPG-claimed.

And, finally, on the next page,

Chart 2 shows the relative total volume of compensable programming for MPAA and IPG-claimed programming. I'm going to -- rather than do the calculations in my head, but you'll see about 23 or 24 million minutes per year for this random sample compared to between 245,000 and 720,000 for IPG, which shows that MPAA has between 97 percent and 99 percent of total volume of programs supplied or programming over the years 2000 through 2003.

And then, finally, I should say, on page 26, Chart 3, shows the viewership shares that I calculated for my direct testimony. I did update these for my rebuttal testimony, updated slightly. But for the direct testimony you will see between 2001 and 2003 viewership share for MPAA programs ranges from 98.4 percent up to 99.7 percent.

Q Okay. Thank you, Dr. Gray. I'm now going to turn to your rebuttal testimony, which I believe is MPAA Exhibit 3665. And is

it fair to say that your rebuttal testimony concerns the allocation methodology proposed by Mr. Galaz, correct?

A That is correct.

Q Okay. And what general conclusion did you reach with regard to the Galaz methodology?

A I would say three general conclusions. One is that it is flawed and unreliable, both conceptually and in its application. Second is that for those flaws or errors that can be fixed, each and every one, once corrected, leads to a lower IPG share according to his metric of relative value.

And then, third, based upon my review of his direct testimony, my methodology and calculations do not change. The only change to my proposed royalty allocation share results from CRGs dismissing certain claimants in certain years by IPG, as well as certain IPG-claimed -- claimants rejecting that

representation.

Q Okay. Please describe, if you will, what your understanding is of the Galaz methodology.

A Yeah. The Galaz methodology is -- of relative value is essentially a relative viewership measure, and I'll try to walk you through why that is the case. Relative value measures the product of three values. The first is a time period weight factor. These are his words. The second is a station weight factor, and the third is program length.

The first, the time period weight factor, is essentially a viewership index. It represents the percentage of viewership on average that takes -- percentage of daily viewership on average that takes place during certain day parts.

The second one, the station weight factor, is the number of distant subscribers of that station. There's a second one, too, I can talk about in a moment. But if you

multiply those two together, so you have the index for viewership during the day, and then the number of people potentially receiving that signal, you have a viewership, albeit imprecisely measured, but you have a viewership prediction.

The third of program length just says a program that is 60 minutes long will have twice as many viewers on average than one that is 30 minutes long on a permanent basis. So taken together, is a relative value measure, is essentially a relative viewership measure.

Q Okay. And why do you opine that the Galaz methodology is flawed?

A Well, ultimately conceptually flawed because it is unnecessarily imprecise in terms of measuring relative viewership. So as an example, if -- he will restrict programs that might have very different levels of popularity.

But if they air at the same time,

on the same station, on different days, obviously, but according to his methodology, by definition, they will have the same value on a permanent basis, even if they have very different actual viewership, very different program type, as Judge Feder pointed out earlier.

And so these things should take -- should be taken into account when predicting viewership and/or measuring value. That is an important flaw.

Perhaps rather than go into much detail, I will show you an example or two that is in my rebuttal testimony that might drive home the point. Let me actually skip Table 1. It's there, too. But Table 2, which is on page 8 of my rebuttal testimony.

And if you look at the last two rows in Table 2 -- start with those -- a couple of cartoons. One is called Pokemon; one is called Dragon Ball Z. They both -- on different days they were broadcasting

retransmitted, but they both aired at 4:30 in the afternoon, both by the station WPIX. Actually, both were half an hour in duration.

So the three values, according to Galaz, duration, station, and time of day. They have to have the exact value. In fact, in the final column you'll see that the IPG estimated relative value is the same for those two.

However, you will see in the second-to-the-last column that my estimate for viewership is quite a bit different. It's about -- I've got to do my math -- approximately 2,700 additional households are watching Pokemon. That's about a 50 percent differential.

So if you add these up, that winds up being substantial. That is a conceptual flaw that can't be fixed, because it's the design of his formula.

Q And that's because his methodology overvalues one program over another because it

does not consider whether or not there was estimated viewing for a particular program, because this is only concentrating on program volume. Is that right?

A Well, ultimately, it's because it ignores measures of program popularity, such as actual viewership. But another flaw in the table, or that is revealed in the table, if you look between these two sets of examples, are the Dragonball Z and Judge Joe Brown right above it.

Judge Joe Brown is a first-run syndication show. I see a smile from the bench. Perhaps it's familiar.

(Laughter.)

But Judge Joe Brown also aired at 4:30, on a different station, though, on KRON, which is not carried by as many subscribers as is WPIX.

So because of that, the IPG methodology gives Dragonball Z much, much higher relative value. What is that? It's

almost 30 times higher, despite the fact that only about three or four times as many households are watching Dragonball Z.

Again, this is a conceptual flaw because it -- the Galaz methodology puts on, in my opinion, too much emphasis on the size of the stations and ignores sort of within-station differences; that is, the programming popularity differences airing on the same station. It's completely ignored.

Q Okay.

A So those are conceptual flaws.

Q Did you have other flaws? Did you identify any other flaws? I'm sorry.

A I sort of identified item of host as appropriate, or I identified a number of flaws in application. The first and foremost flaw in application is that he relies upon a non-random sample. And we talked about sort of importance of having a random sample earlier.

And secondly, actually, the non-

random sample is taken from a population of CSOs that is not the entire universe of CSOs, but it restricts his selection of CSOs from just the larger CSOs; that is, the Form 3 CSOs. It does not select any stations airing on only Form 1 and/or Form 2 CSOs.

But the importance of the non-random sample, as I said earlier, is that you can make no valid statistical conclusions regarding relative viewership or relative value for programming airing on stations outside the sample.

His issue with just focusing on Form 3 CSOs, two things. One is you don't capture any programming on the smaller CSOs, but also he winds up overstating his coverage. He mentions he covers -- I don't remember the numbers, but it's in my testimony -- but 33 to 35 percent of CSOs, when in fact that is the percentage of Form 3 CSOs. It's a smaller percentage of all CSOs.

Another flaw in his methodology

has to do with his exclusion of compensable program titles. And I identified this just based upon his data, and what I had noticed is, while he identifies programs such as the Fresh Prince of Bel-Air and Simpsons as compensable MPAA programming, which they are, he fails to identify The Simpsons or The Fresh Prince of Bel-Air as compensable MPAA programming.

Similarly, there are numerous foreign titles, actually titles with accents in them, which I am not going to try to pronounce but they're in my testimony, that he excludes. And he appears to have some issue in the software that he uses in terms of reading and accents, but -- and these disproportionately tend to be MPAA-represented programming, but he excludes them from his analysis.

So I look at those stations where I overlap with his and find that his share of IPG royalties would decrease between 7.5

percent and 14.4 percent. If you follow his methodology to the letter, all his other flaws that I haven't yet identified -- well, including the non-random sample -- but just put back in those compensable programs that should not have been excluded, his share drops by that amount.

Next flaw, in addition to excluding compensable programming, he includes programming that I understand to be non-compensable; that is, programs that aired on distantly retransmitted Canadian signals, but they originated outside of the United States. So I understand that they are not compensable and that they are irrelevant to this proceeding.

These tend to wind up being -- and it's shown in Table 3 of my rebuttal testimony -- these wind up being disproportionately IPG-represented programming.

So if you follow, again, his approach to the letter, and just correct this

one mistake, and exclude these programs that I understand should have been excluded but were not, that's a more modest impact, because these Canadian stations aren't -- they're relatively small, but it winds up being a reduction in the IPG share of between 2.7 and 7.9 percent per year.

Q Any other flaws?

A I'm going to skip a couple. Let me go to the -- his false assertion regarding the time period weight factor, because the time period weight factor is an important variable in his formula. It's one of the three.

He asserts in his written testimony that he calculates a different time period weight factor for each half hour of the day; that is, the percentage of viewership that takes place on a half-hour basis.

When I looked at his data and tried to figure out exactly what he was up to, I found out that there were only six time

period weight factors that he uses, so based on very broad day parts. And this is highlighted in Table -- use all the words -- Table 4 on page 22 of my rebuttal report.

I'll show you a couple of examples to illustrate how important this is to his conclusions. We'll look at the first two rows. The first is Andromeda, which is a one-hour science fiction show, which I personally have not seen but it's a favorite of my youngest brothers, but it's MPAA-represented, has a bit of a cult following. And in May of 2002, it aired at 5:00 p.m.

Also, the next row down I should say, before I go on, at 10:00 a.m., the video Computer Store represented by IPG on February 3rd at 10:00 a.m. Very different time, but according to Mr. Galaz's data, he gives them the same time period weight factor.

Because the programs are the same length, both airing on WGN, both had the same Galaz time period weight factor, by his

formula they have the exact same relative value. However, as shown in -- what is that, the third column from the right? My brother's favorite show has almost 10 times as many households viewing it.

A similar example with the next two. The point there is this use of a broad time period weight factor leads to, arguably, indefensible relative value estimates.

If I correct just that measure and do what he says he did in his direct testimony -- and that is to put in 48 time period weight factors, one for each half-hour -- I find -- but include all of his other mistakes, I find that his calculated share for IPG royalty would drop between 16.6 percent and 23.8 percent each year between 2000 and 2003.

Q I just wanted to go back to --

CHIEF JUDGE BARNETT: I'm sorry. Could you repeat those percentages, or are they in your written testimony?

THE WITNESS: They are. I will

read them by year, though, because I have the page in front of me. In the year 2000, IPG's royalty share would decrease by 17.7 percent. In the year 2001, it would decrease by 23.8 percent. In the year 2002, it would decrease by 17.1 percent. And in the year 2003, it would decrease by 16.6 percent.

CHIEF JUDGE BARNETT: Thank you.

BY MR. OLANIRAN:

Q I will come back to this line in a second, but I wanted to ask you -- remember, you identify the data sets that you used for your regression analysis. Remember that?

A I do.

Q Yes. You received a data set from Reznick Group, which ultimately you used in your analysis, remember that?

A Yes.

Q And did you make any modifications to the data you received from the Reznick Group before using it in your analysis?

A Yes. And this is described, not

in my expert report, but in my description, my analysis, that I understand was turned over to IPG.

But in performing routine, you know, data integrity checks, and naturally looking -- were actually really looking for information that we could use to accurately predict distant viewing, I noticed that there were a series of what appeared to be network programs in the Reznick/Tribune data.

And I had understood that network programs were not compensable and should have been excluded. And these were designated by a type code I think of A, C, or N, which refers to ABC, CBS, and NBC, and confirmed via counsel that, indeed, those were network programs. And so those were dropped from my analysis.

Q And then, going back to your analysis of the Galaz methodology, what did you conclude ultimately as to the methodology?

A I concluded that it was not

reliable.

Q Also, you are aware of the Judges' recent decision to reclassify the claims of the U.S. Olympic Committee and the United Negro College Fund programs to the program suppliers category. Did you go back to revisit your analysis with respect to those two claimants to see whether or not your proposal would change?

A I did. And I also went back through additional ones I learned of last night with respect to I think BBC Worldwide, and there was another I'm not remembering --

Q Reel Funds?

A Reel Funds perhaps.

Q And Venevision?

A And Venevision. These all sound familiar. But went back and replicated the analysis, and my calculated MPAA royalty shares did not change to the second decimal point. I think they changed to the third or fourth decimal point.

My proposed royalty allocation share, as well as royalty viewing, are unaltered by those inclusions of IPG-claimed programming.

Q So just have you now considered all of the changes based on the orders by the Judges from the March 21st order and the decision -- the determinations that the Judges made yesterday with regard to certain claimants, as well as -- I feel like I'm missing one other one.

A Well, as well as certain claimants who rejected representation.

Q Okay. So having considered all of that, do you now have a final share allocation that you are recommending to the Judges?

A Yes. It is on page 26 of my rebuttal report, the final column. And I will just go ahead and read them, I suppose. This is proposed MPAA royalty shares by year -- the year 2000, 98.93 percent; the year 2001, 99.72 percent; year 2002, 99.69 percent; and the

year 2003, 99.80 percent.

MR. OLANIRAN: Those are all the questions that I have, Your Honor.

CHIEF JUDGE BARNETT: Thank you.

MR. OLANIRAN: Thank you.

CHIEF JUDGE BARNETT: Okay.

JUDGE FEDER: Dr. Gray, can you just state the basis for computing and reporting this to two decimal places?

THE WITNESS: That's actually a very good question, and the answer is -- and this is in the footnote on page 26. I have a 95 percent confidence interval that provides sort of a lower and upper bound.

And so in my first report I did it to one decimal point, but the main reason for doing it is just there is a material difference with respect to one and two decimal points, so I decided to report the point estimate to two. But it could certainly be done to one decimal point.

MR. OLANIRAN: And, Your Honor, if

I may just go back on the record, just one more question. I meant to make a clarification.

BY MR. OLANIRAN:

Q Your testimony with regard to IPG's -- the Galaz methodology's time period weight factor, do you understand that since you filed your testimony that IPG has since corrected that?

A I understand that they represented that they tried to correct it, yes.

MR. OLANIRAN: Okay. Thank you.

CHIEF JUDGE BARNETT: Now, Mr. Boydston.

MR. BOYDSTON: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. BOYDSTON:

Q Good morning, Dr. Gray. My name is Brian Boydston. I represent the Independent Producers Group. I want to ask you about this concept of -- well, strike

that. Let me just ask you a question, sort of a hypothetical.

In terms of program homogeneity, would you consider that a children's cartoon broadcast out of Toronto, and a children's cartoon broadcast out of Buffalo, though roughly the same -- aimed at the same age group, would be fairly -- considered to be fairly homogenous programming? Relative to all programming there is?

A Relevant to all programming, I would expect it to be perhaps more homogenous. But, ultimately, I would like to see the distant viewing and/or local ratings associated with those programs. I mean, certainly some cartoons my kids would have told you 10 years ago are more popular than others.

Q Would it be safe to say that a cartoon being broadcast out of Toronto probably, in most cases, is going to be more homogenous with a documentary broadcast out of

Buffalo or anywhere else?

A I'm sorry. Can you repeat the question?

Q Sure. Wouldn't you say that two cartoons are probably more homogenous than a cartoon and a documentary, for instance?

A I would expect them to be. Certainly, they sound more similar, two cartoons.

Q Right.

A Of course, it ultimately depends on what one means by "homogeneity," but yes.

Q Well, in your discussion, or I should say your response to questions by counsel, about the homogeneity of the program suppliers group, your testimony was that it is generally homogenous, correct?

A Correct.

Q However, within that group, we have some programs that are very, very different, for instance, a children's show and a documentary. Wouldn't those be considered

fairly non -- I can never pronounce that word -- not very homogenous?

A Yeah. I certainly think a documentary is different from a cartoon. If that's your question, I will say yes.

Q And although certain Canadian broadcasts are in a different group than the program suppliers category that are in the Canadian claimants group, in many respects, some of those programs are probably more homogenous than programs within the program suppliers group, like a documentary and a cartoon, right?

A That is potentially the case. I certainly did not make the demarcation of what goes into program suppliers or what goes into a different Phase 1 category.

Q Let me turn to your testimony with regard to the two samples that you used in your analysis, the one that was developed by Ms. Kessler and the one by you. Now, there were different numbers of stations in each

group. You had a few more stations in your group than she did, correct?

A Yeah. I don't recall her exact number. I think it varied by year. But I think in general I had more in my sample than she did.

Q And then, what you wanted to do is compare your list and Ms. Kessler's list and essentially make analyses between the two, correct?

A I would not characterize it that way. What I did was I -- for those stations that we had in common, that is where I could make a -- perform the mathematical check in terms of how local ratings was associated with distant viewing.

Q So in making those comparisons, you weren't taking -- that was where my questions were going. You weren't taking your entire set and Ms. Kessler's entire set; you were just taking those within each set that were the same.

A Right. That's why I said my testimony is there is approximately 70 stations per year.

JUDGE STRICKLER: Counsel, may I interject for a second?

MR. BOYDSTON: Yes.

JUDGE STRICKLER: Since you were looking for this overlap between Ms. Kessler's sample stations and your random -- stratified random sampling of stations, would it be fair to say or accurate to say that by looking for the overlap, since Ms. Kessler's sample was not random, and you said that troubled you before, that that somehow -- I don't know if this word is an overstatement, but polluted the randomness, or compromised is perhaps the better word, the randomness of the sample that you yourself had selected.

THE WITNESS: That's a very good question. Hence, I used the word "queasy" early on. But absolutely, and so that's why I took steps to say, "Okay. Is the

relationship between local ratings and distant viewing somehow affected by the fact the Kessler sample is non-random? And so I took tests to try to look at what I expected to be the case and looked at smaller -- sort of smaller stations within the Kessler sample and larger stations within the Kessler sample.

JUDGE STRICKLER: Maybe I didn't appreciate what you said before on direct, or maybe you didn't say it, but what steps did you take to try to mitigate the problem of the lack of sufficient randomness caused by the overlap?

THE WITNESS: So when -- there is an overlap of approximately 70 stations, so what we have there is, you're right, it's a subset of my stations, of the random stations, and a subset of her non-random stations.

What you have is distant viewing hat is potentially non-random, right? Selected non-randomly. The local ratings is from a random sample, but now we're a subset

of those samples.

So what I checked was let me take smaller CSOs from the Kessler sample or -- I'm sorry -- I should say smaller retransmitted stations, I misspoke, so the lower quartile of CSOs, and look at the correlation there and sort of run my analysis just on those lower CSOs.

And the idea here is this, is the big concern with the Kessler sample, in terms of randomness, is it was selected really to take the larger stations. And so the concern is, is the relationship between local ratings and distant viewing somehow different with smaller stations? So that is really the only concern.

If the relationship is different for smaller stations, then when I make my projections across my random stations I might have a -- to use your word, a polluted prediction. But what I found is if I use just the lower quartile of Kessler, or the next

couple or top quartile, I wound up getting essentially the same exact prediction, leading me to the conclusion that the relationship between local ratings and distant viewing is not dependent upon the size of the station being retransmitted in terms -- when I say "size," I mean the number of distant subscribers.

The one exception to that, as I said before, was WGN, which just seemed a little wacky, for lack of a better word. That's non-scientific, and so I ran a separate regression for WGN.

You are making an expression which I am trying to -- does that make sense to you?

JUDGE STRICKLER: It makes sense to me, but I thought Ms. Kessler said a non-random sample was a sample based on the size of the CSO rather than the size of the station. Or am I mistaken?

THE WITNESS: It is based upon the -- let me get Kessler here, if I have it in

front of me. But it's in terms of the -- ultimately, it is going to be the stations. I don't have it in front of me. That's the best of my recollection.

MR. BOYDSTON: For what it's worth, it's mine as well.

THE WITNESS: Okay.

JUDGE STRICKLER: Okay, good. Appreciate it.

BY MR. BOYDSTON:

Q Now, as you were saying, the Kessler list was basically chosen in terms of size, correct? And what you determined was, despite the fact it wasn't random, as it turned out, when you compared it to your selection of stations and went through the different quartiles, you found that there wasn't a significant difference created by the fact that she chose it based on size, correct?

A Right. Because, remember, my ultimate goal is to predict distant viewing for my random sample. And the key here is

just to have the relationship, not only between local ratings but all of the factors in distant viewing to be stable across sort of station size.

And I found that to be relatively stable, so I was comfortable from a statistical point of view making the projections based upon these overlapping stations to just my random stations.

Q And you certainly examined the Galaz direct testimony and the Galaz rebuttal testimony, correct?

A I reviewed them, yes.

Q Yeah. To review the methodology, correct?

A Yes.

Q And isn't it true that the stations selected for the IPG methodology were also based on size. It was the top 200 or the top 230, depending upon the sample, correct?

A That's correct, yes.

Q Okay. Like the Kessler selection

as well, which was also based on size, although it was smaller, correct?

A Right. That's why I said before I would not draw conclusions from the Kessler sample alone with respect to royalty shares, and I would not draw conclusions from the Galaz sample alone with respect to royalty shares.

Q But when you conducted your test to compare the Kessler selection versus your selection, what you found was the exclusion of those smaller stations, as you called it, by Kessler didn't have a significant impact on the analysis you were running at that time --

A If --

Q -- of the analysis you were running at that time, correct?

A I just want to make sure you understand what it is that I was looking at. What I was looking at is the relationship now between local ratings, number of distant subscribers, quarter-hour of the day, et

cetera, the relationship between that and distant viewing. The key is I want stability of that in order to make projections for my random sample. But ultimately my prediction for distant viewing is for a random sample.

Q You stated that at the end of your analysis you -- and this was I think in your introduction to your analysis -- you said at the end of it what we had was we had a measurement of viewing for each individual program, correct?

A In my random sample, yes, on the quarter-hour basis.

Q But for each program, correct?

A Correct.

Q Was that generated into some kind of a document or an electronic file or something like that, I presume? It was generated somehow, correct?

A Yes. Well, ultimately the projections are made, and then they are added up to get the numbers that are presented or

the relative percentages that are presented in my testimonies.

Q Okay. I ask because I have seen no document that has that information on it, i.e. the MPAA's -- or, excuse me, I should be specific, i.e. the MPAA's study -- statement as to how much viewing there was for each program. Is that document anywhere in the materials that have been put before the panel?

A Is that document? No. No. What is put before the panel is the percentage of relative viewing between MPAA and IPG in total.

Q To your knowledge, was that document ever produced to IPG?

A To be clear, what you would be talking about is, you know, a document of about 6.8 million quarter-hour observations of relative -- of programming on the quarter-hour basis. I don't know if that document per se was actually ever produced, period. I mean, it wasn't necessarily retained.

Q But it was generated in electronic format, certainly, because that's how you got the information, correct?

A Well, when you say "generated," right, so you -- it is perhaps in the ether state of a computer program. It is projected by the regression, and then you write a code to sum up those numbers. So you would get a little loop that sums up the numbers, and then, you know, generates the numbers that are presented in the testimonies.

Q And was that ever -- you said it -- was that calculation of a viewing value for each program ever saved or put into a discrete document that anyone can look at?

A Well, what was turned over was the regression specification, and then -- and turned also the codes to sum up the output of the regression specifications. That was turned over, yes.

Q It sounds like that means the answer to my question was no, there is no file

or document that lists all of these programs that we are talking about, and shows the corresponding value the MPAA methodology attaches to it. That doesn't exist. It's not before the panel, is it?

A To be clear, I have never seen such a document, so I --

Q I'm asking whether it's before the panel, and I guess your answer means it's not, correct?

A I have not seen it, the panel has not seen it, it has never been generated.

Q Could it be generated?

A Yes, I could provide --

Q Has it been generated?

A No, it has not. I could provide a document of 6.8 -- approximately 6.8 million distant viewing for IPG programs as well as for MPAA programs.

Q But, clearly, it was necessary to have it in some form to then arrive at the final percentages you have given to the panel,

correct? Otherwise, how do you come up with those percentages?

A I'm somewhat confused by the way you are thinking about it. The way I think about it is you have five raw databases that you combine together. And based upon those five raw data sets, you know, which is a tedious process, but relatively straightforward, you run the regressions that I described and predict out distant viewing.

I turned over to you the exact specification of those regressions, and so you predict out distant viewing, add up the distant viewing. This is a program -- it's not any document that I've seen, even in -- it's not even in the program, in the loop, to get the relative program shares.

Q Well, I guess the trouble I'm having is I understand how you are saying you arrived at these numbers, but, from my -- what I can tell, there is no way anyone else can figure out how you added this up.

I appreciate that the MPAA methodology, as you testified, has come up with a separate value for each of these programs. And then you have added up all of the IPG programs' values, and you have added up all of the MPAA programs' values.

But how can I or the Judges make sure that it was done correctly, or even see how much value was given to Program A versus Program B?

A Well, I can tell you how, which is, again, I provided a document which had a roadmap of the steps to take, which is to -- you take these five data sets that I described, merge them together based upon station, date, quarter-hour, run the regressions, because quite frankly I don't know what one would do if -- well, I guess perhaps it would simplify it for you. But if you run the regressions, you have the output on predicted viewing, and add them up.

And this is important. I had a

team of people in my firm do it, and then I had a separate, independent team, I said, "Okay. Here is the raw data. Here is a brief description. Replicate it." And they did.

Q I'm familiar with the roadmap. The roadmap, though, does not provide the end answer, does it? It doesn't provide this information I am asking for, which is the specific calculation of value for each program pursuant to your methodology. It doesn't include that, does it? And that has never been provided, has it?

MR. OLANIRAN: Objection. Your Honor, it has been asked and answered.

CHIEF JUDGE BARNETT: Sustained.

BY MR. BOYDSTON:

Q In your testimony, you talked about different tests that you ran to essentially test your regression analysis, correct?

A Yes.

Q And one of them was the one we

have been touching on earlier where you took different permutations of Ms. Kessler's list and ran separate analyses as to different quartiles, correct?

A Correct.

Q And you said you ran a separate regression analysis for WGN, I believe, right?

A That's correct.

Q I didn't see this in your testimony, but am I incorrect, was this in your testimony, your written testimony, I mean?

A The separate for WGN, yes, it was. It was in the appendix to my amended testimony, I believe.

Q Okay. Appreciate that. I must have missed that. I didn't see it there.

JUDGE STRICKLER: Is that your Appendix C?

THE WITNESS: Appendix C has the abbreviated version. The extended version was turned over to IPG in a log file, but yes.

BY MR. BOYDSTON:

Q Now, another comparison that you said you made, sort of -- I think the word you used as a "benchmark" -- was the total volume of unique programs by the MPAA and by IPG, correct?

A That is correct, yes.

Q Now, when you did that, when there were situations in which both the MPAA and IPG had claims on a program, who did you credit that program to in coming up with this comparison? Did you credit it to the MPAA?

A If both IPG and MPAA selected the same program, then I credited it to MPAA, yes.

Q And so, of course, that made the MPAA percentage or total higher than it would be than if had been according to the IPG or if they had each been recorded a half-share, obviously, right?

A Yes. Insofar as it is non-zero, yes.

Q And you didn't include any

Canadian programs in that calculation either, right?

A Not programs from Canadian stations, no.

Q Okay. And I think you also testified that Canadian station programs, just before -- or, excuse me, that IPG programs, there are a disproportionately higher number of IPG programs coming out of Canadian stations than MPAA programs, correct?

A I believe I testified that a disproportionate number of non-compensable programs were, yes.

Q But that's --

A That I understand to be non-compensable.

Q That is only your understanding, that they are non-compensable. They are Canadian. And when you said non-compensable, you meant Canadian, with the assumption that they are non-compensable because they are Canadian, right?

A It is my understanding that they are non-compensable if they originated out of Canada, yes.

Q And what is the basis for that?

A It was Marsha Kessler's testimony.

Q Anything else?

A No.

Q Okay. You are not familiar with the Phase 1 definitions of the different categories here, is that correct?

A I don't know the exact definitions of the different categories, no.

Q Now, if it were the case that certain Canadian programs were compensable to IPG, then that comparison that you made of total program volume would be -- need to be adjusted, if that were the case, correct?

A Well, my calculation of program volume is from a random sample of stations. I would have to give it thought whether or not a change in the universe from which it was drawn, how that would affect my ultimate

conclusions.

Q Okay. And these were your charts on page 22, I believe, of your --

A I was looking at 23, but now I'm looking at 22, yes.

Q And then the other comparison was unique programs -- excuse me, unique program retransmissions. Now, there again, any program that was claimed both by MPAA and IPG, you credited to the MPAA, right?

A That's correct, yes.

Q And you didn't include any Canadian programs, right?

A I do not believe there is any Canadian programs contained in there. I would have to check. I don't know if there are any Canadian programs on non-Canadian stations. I don't know the definition that you are using of a Canadian program.

Q Now, with regard to page 8, Table 2 -- Table 2, I believe, on page 8 --

A This is must be the rebuttal

testimony?

Q Yes, which I did not bring with me. You discussed the comparison that you are making between different programs in the different -- in the various time slots to argue that the problem with the IPG approach was that it would be according the same value to two different programs that happen to come in the same time slot, even if they had different viewership, correct?

A In this case, different viewership, yes.

Q Okay. Now, you are familiar with the fact that sometimes when the Nielsen data falls below a certain level of viewers being sampled, there are relative error rates that become a concern at some point, correct?

A Yes, I'm familiar with relative errors and the associated issue with small sample size, yes.

Q And, in fact, there is -- well, I don't know. Sorry, you weren't in the room

when this happened. Are you aware that Nielsen itself acknowledges that when you get under 10,000 people, or 10,000 households, there is a high relative error rate, correct? Or actually I shouldn't say correct. Are you aware of that?

A Yes. I have actually -- I wasn't here this morning, or earlier this morning, but I have read Mr. Lindstrom's testimony in prior hearings where he has made those conclusions, yes.

Q Now, in looking at your Table 2 here under the column Nielsen Viewing Households, all three are -- or three or the four of those are under 10,000, and one is just a hair above 10,000 at 10,888. That's correct, right?

A That is correct, yes.

Q And so that would fall certainly into the range of the concern over relative error rates expressed by the MPAA itself, correct?

A Yeah. Yes, with relative error. But, again, these are point estimates, and you have to keep in mind what Mr. Lindstrom's concern is with respect to relative error, because I have -- although I was not here earlier this morning, I have read his earlier testimonies, and he has made it clear, I believe, that the relative error issue is with respect to a particular observation, and that this issue with respect to the relative error decreases actually dramatically for each successive observation.

Q But by the same token, it is still a concern when you are focusing in on a particular quarter-hour or half-hour segment, correct?

A Right. That's why one needs to make steps either via regression analysis and aggregate information, or the way Nielsen does it, which is to look at the results in total.

Q Now, you pointed out an error that -- in the application of -- excuse me, let me

start over. You pointed out that IPG made an error in the application of its own methodology with regard to the time period weight factor, in that they employed only six different time periods as opposed to 48, which is what their methodology was, correct?

A That's correct, yes.

Q I think that you would agree that it is appropriate, then, that IPG should correct that in its analysis, right?

A That's one of several corrections they should make. But even after making all of their corrections, as I pointed out earlier, it would still be a flawed and unreliable analysis.

Q Well, that remains to be seen. Now, you said that you made a change to the material you received from the Reznick Group. Do you recall that in your testimony here today?

A Yes.

Q Now, was that reflected in your

amended written statement?

A It was reflected in my data description document that we spoke about moments ago.

Q Okay. So not in the amended statement, but in the -- we had some other term we used for it -- in the roadmap.

A Roadmap, sure.

MR. BOYDSTON: Your Honor, I've got more than another 20 minutes at least, so I don't know if we want to break for lunch or not. I happen to be staring practically at the clock is all.

CHIEF JUDGE BARNETT: I'm definitely ready to break for lunch. I expect I'm not alone in that. So we will break at this time, and we will keep our 1:30 reconvening time, so we have a full three hours this afternoon.

(Whereupon, at 12:07 p.m., the proceedings in the foregoing matter recessed for lunch.)

CHIEF JUDGE BARNETT: Mr. Boydston, do you want to continue with cross-examination?

MR. BOYDSTON: Thank you, your Honor.

BY MR. BOYDSTON:

Q Dr. Gray, with regard to the MPAA methodology, you didn't create it, correct? You sort of inherited it from others who had devised it originally and worked on it before; is that a fair statement?

A No.

Q Okay. In what respect is that not a fair statement?

A I would describe it as myself creating it.

Q Okay.

CHIEF JUDGE BARNETT: I'm sorry. I didn't hear that.

THE WITNESS: I created the methodology.

BY MR. BOYDSTON:

Q Okay. Were there aspects of prior MPAA methodologies that you used in that process?

A No.

Q Okay. It's fair to say, though, that the MPAA has used viewership-based methodologies in the past, correct?

A Yes, that is true.

Q And are you familiar with the methodologies the MPAA has used in the past?

A Yes. For example, the 1989 methodology I'm familiar with.

Q And, in fact, this methodology, your methodology, if you will, is similar to it, correct?

A No, I do not believe so.

Q Okay. I beg your pardon. I'm going to have to step over my desk. I forgot to bring something up with me. This is a copy of the decision in the 1989 proceedings, and I'd like you to take a look at it. Are you familiar with this decision from the 1989

proceedings?

A I'm familiar with the decision. You'd have to put it in front of me to make sure that we're talking about the same one.

Q And that I shall do. There you go. I seem to only have two other copies. Well, it's not going to be submitted as an exhibit, and we'll read the relevant portions. If someone really wants one copy, I kept two I can give to two people.

MR. OLANIRAN: If I could have a copy.

MR. BOYDSTON: Sure. That was you, Cliff, Mr. Harrington? Oh.

BY MR. BOYDSTON:

Q And I apologize, Dr. Gray. Did you say that you were familiar with this or you were not?

A I believe I reviewed it at one point in time, but it's probably been over a year ago.

Q Okay. In your own words just a

few minutes ago, you referred to this. And I guess what you were saying is that you were familiar with this one in particular, correct?

A Again, I believe so. I reviewed several decisions a year ago. This appears to be one of the ones that I reviewed.

Q Okay. If I could ask you to look at page 15.290, and that's at the very bottom of these pages in the middle, in very small type I'm afraid. But do you see where the numerals are there? It says 57 Fed Reg 15, and then the one I'm referring to is 290.

A Yes. It's in larger font up on the top left, which is even easier on my eyes.

Q Oh, good. I don't have that because I've got it folded over funny. Now, in the middle column, there's a paragraph that begins, "To do this, Nielsen first determines the local viewing to a particular show (in January or October). Then to construct the distant viewing, it refers back to the next earliest four-cycle sweep period (except July,

which Nielsen does not consider a representative period). And for that same time period, it ascertains the ratio of distant to local viewing that occurred during the same day part. Nielsen then applies the ratio to the January or October show and determines the distant viewing."

It seems to me that there are aspects of that, certainly, that are similar to your approach. Would you agree or disagree?

A No. They seem to be doing some interpolations over time, whereas mine does not do that.

Q It goes on to say, "For example, if the ratio is 15,000 distant viewers to every 85,000 local viewers for the earlier show shown in the comparable day part, and the show in January or October was viewed by 42,500 households in the local market, Nielsen would estimate that 7,500 households viewed it in district markets."

It seems to me, from reading this, that what they're doing is taking local ratings and using them to try to extrapolate distant ratings. Would you agree with what I say that that appears to be what they're doing here?

A It appears -- you know, I'd like to sit down with this a little bit more -- but it appears to be over time. They're referring to sort of different four-period cycles.

Q Right.

A And that's something that I did not do, which is sort of a very different methodology.

Q Okay. Would you agree that it's somewhat similar, though, to your approach in that it is trying to take local viewing, develop some tools from that, to then predict distant viewing?

A That's what it appears to be saying, but it's not similar to my methodology. Again, my methodology, as I

described before, was done on a quarter-hour basis matched up on the exact same quarter-hour for distant viewing and local ratings. So it seems very different to me.

Q Your methodology does take ratings for distant viewing during the four months, referred to as sweeps weeks or sweeps months, and then, from that, fills in the blanks for the other eight months in the year, correct?

A Well, as I described before, it does a number of things. It aggregates all the information over these periods of time and predicts it not only for the non-sweeps months but even during the sweeps months, as well.

Q And, in fact, you changed your testimony to say you're really using six months, not four, correct? I thought that was something you said --

A No, no, that's absolutely correct. There were six sweeps months for expositional purposes, yes. More data, in my opinion, is better than less data.

Q And do you consider that to be a significant difference using six months as opposed to four then? I know you said more is better. Do you think it's a significant amount better?

A It's preferable. The adverb "significant," I can't opine with respect to that. It's better.

Q Well, I guess, you know, there's, out of 100, 11 is better than 10, but 50 is a lot better than 10. That's what I'm saying, significant. Do you think it's a significant change going from four months to six months? Preferable, I understand. But do you think it's significant or do you not?

A I would be happy -- I'm trying to figure out how to answer that question. It's somewhat vague. It's a 50-percent increase in months, which is a good thing. Is it significant? It's difficult for me to opine whether or not that's a significant difference. I strongly suspect -- this is the

reason why I'm hemming and hawing, and pardon me for doing that. I strongly suspect that, if I only used four months, I'd come up with almost exactly the same results. So insofar as that's the case with respect to my conclusions, I don't think it's significant or I would not expect it to be significant.

Q Okay. Now, in your study, the local ratings are taken from 120 stations, correct?

A That's correct. Approximately.

Q And the distant ratings data is taken from 81 to 125 stations that were in Ms. Kessler's list, correct?

A Well, actually, even less than that, but that's correct. That's the upper bound.

Q And you say less than that because you would only do the comparison with those stations chosen by Ms. Kessler that also fell within your group, correct?

A Correct.

Q And I think you said it was 70, correct?

A I said it was, on average, about 70 to 71, but it was less than 70 in the year 2000, greater than 70 in the years 2001 through 2003.

Q Okay. Because they're selected by different -- your list was different, selected by a different means than Ms. Kessler's, and so they're not, one is not the subset of the other, correct?

A I don't quite understand your question. Because of what?

Q You know, I'll withdraw the question. The point's made there are only 70 that are in the same group.

A There are approximately 70 --

Q Approximately.

A -- per year that are in both the Kessler sample and then my random sample, yes.

Q Okay. So the relationship that exists between the local ratings in the

stations you selected and the distant ratings that Ms. Kessler selected are not on a station-by-station basis but a broadcast by broadcast basis, correct?

A Right. In fact, a quarter-hour by quarter-hour basis.

Q And you said this in different context. I just want to make sure it's the same here. There's no Canadian stations in any part of that analysis, correct?

A That's correct.

Q Or Mexican stations, I presume.

A That's correct, as well.

Q And, again, that's based on your understanding that all Canadian and Mexican programming, broadcasts, if you will, are not compensable?

A It is what it is. I mean --

Q Well, you didn't include them, and the reason you didn't include them is you understood they weren't compensable, correct?

A My understanding is they weren't

compensable and/or they're very small, yes.

Q Very small. Okay. Isn't it true that some of the Canadian stations are some of the most heavily re-transmitted stations --

A And when I say very small, I mean very small fraction of program, compensable programs, supplier programming, is my understanding.

Q Let me ask you to look at what is Exhibit 4 to the direct case of Independent Producers Group, and I'll represent to you that this, obviously, was an exhibit to the IPG direct statement. And the document there is a listing of IPG stations surveyed. I think you reviewed this, correct?

A I believe that's the case, yes. It looks very familiar.

Q Okay. And I'm not going to ask you to authenticate the document because you didn't create it, obviously. But just as a general matter, you understand that this is purporting anyway to rank stations by the

total distant fees generated station by station, correct? As I say, that's what it purports to be. I'm not asking you to give it a Good Housekeeping Seal of Approval.

A No. That's certainly what it appears to be, yes.

Q Okay. And do you see that the fourth station by fees generated is CBUT?

A I do see that, yes.

Q And are you familiar with the call sign designations that begin with a C, that they are Canadian stations?

A That's my understanding, yes.

Q And that the 9th station is also a Canadian?

A Yes. The 9th, for the record, would be CKSH.

Q And the 17th, CBET, that's also a Canadian station?

A Yes.

Q And so, to the extent this list is accurate, three of the largest -- I should

make this very clear. Of the 20 most re-transmitted stations in the United States, three of them are Canadian, it would appear from this document, correct?

A Yes.

Q And, again, the reason that you did not include Canadian stations in your survey or, excuse me, in your study was because you were under the impression that they weren't compensable based upon what you were told by Marsha Kessler, correct?

A Right. And I was also told that they had a relatively small fraction of the Phase 1 program supplier category.

Q Did you make that determination yourself, as well?

A No, it was represented to me.

Q By who?

A By counsel.

Q And -- but you never confirmed that with numbers of your own?

A No, I have not.

Q Okay. Now, you did testify that you found that Canadian broadcasts were over-represented in the IPG stations surveyed, correct?

A I believe what I testified to is, of those programs on the Canadian broadcast, they were disproportionately non-compensable with respect to IPG programs.

Q I misspoke, and you're correct. But when you say non-compensable, what you mean was is they were Canadian broadcasts?

A Right. And that they originated in Canada.

Q So the point being that IPG has a disproportionate number of Canadian broadcasts in the programs it's claiming in this proceeding, correct?

A That originated in Canada. That's my understanding, yes.

Q Now, with regard to the logic of the MPAA methodology, as you say -- well, I shouldn't say that. I was about to say as you

said, but that's why I'm asking the question. It's based on household viewership, correct, as a predictor of market value?

A Correct.

Q And your logic for that is that, from a cable system operator's perspective, the more popular a program is the more subscribers will be attracted to a given cable system; is that correct?

A Right. That program viewership is a measure of underlying subscriber demand and then that, in turn, will lead, greater underlying subscriber demand will lead to greater subscriber retention and attraction, yes.

Q Now, I know that you have some familiarity with past decisions, including one I've given you we've talked about a little bit. Isn't it the case that that concept has been rejected in prior Phase 1 proceedings, including the 1989 proceeding?

MR. MACLEAN: Objection, relevance

from this witness.

CHIEF JUDGE BARNETT: Sustained.

BY MR. BOYDSTON:

Q Are you familiar with the board survey?

A I've heard about it and read about it.

Q Do you have an understanding as to the methodological basis of the board survey?

MR. OLANIRAN: Objection, your Honor. Relevance again.

MR. BOYDSTON: Well, if I may, I'm comparing, I wish to ask him to draw a comparison between his study and the board's study for purposes of elucidating the nature of his study; that's all.

MR. OLANIRAN: Your Honor, Dr. Gray did not testify to the board's survey. It's completely, completely outside of the scope.

MR. BOYDSTON: Well, my argument would be the board survey tries to survey many

of these same things using some things that are similar with this and some things that are different, and that's my goal in my inquiry.

MR. OLANIRAN: You're not asking Dr. Gray about the board's survey. It's just asking, he's asking him about --

MR. BOYDSTON: I can't hear you. I'm sorry.

CHIEF JUDGE BARNETT: I don't want a narrative. Thank you, Mr. Olaniran. It is outside the scope of direct examination, and the objection is sustained.

MR. BOYDSTON: Okay. Thank you, your Honor.

BY MR. BOYDSTON:

Q Are you familiar with the Phase 1 2004 - 2005 decision?

A I've reviewed it at one point in time.

Q Okay. Do you recall that in that decision the decision said that many factors come into a CSO's decision to transmit a

station, but, ultimately, the most significant concern is net revenue generation?

MR. MACLEAN: Objection, relevance, relevance as to what the decision says.

MR. BOYDSTON: I'm trying to get behind, well, I'm trying to get behind what he knows about these things and how they influenced his decision to set up the study the way he set it up.

CHIEF JUDGE BARNETT: I'll allow it. Overruled. Go ahead.

THE WITNESS: I'm sorry. Can you repeat the question.

BY MR. BOYDSTON:

Q Yes, I'll come at it from a different angle to be of assistance. I asked you about the underpinnings of your survey, and the first thing we sort of established or agreed upon was that you see viewership as having an important relationship to value to a cable system or operator, right?

A That's correct, yes.

Q And isn't it the case that in the Phase 1 2004 - 2005 decision, it was acknowledged in that decision that net revenue generation by a CSO is a very important factor, correct?

A That's correct.

Q And --

A And I'd also say that subscriber growth contributes to net revenue maximization.

Q Okay. Now, in such familiarity that you have with past decisions by the CRT and the CARP about the use of Nielsen ratings, isn't that true that some decisions have been critical of the usefulness of Nielsen ratings in assigning value to a cable system operator for a particular broadcast?

A There have been some prior decisions that were critical, yes.

Q I'm going to refer to one in particular, and I'll just read it. It's

fairly straightforward. This is from 69 Federal Register at 3613 from the 1998 - 1999 Phase 1 proceeding. Quote --

A So this is also Phase 1?

Q This is Phase 1, correct. "The devaluation of the Nielsen study is a result of the panel's consideration of the hypothetical marketplace. Evidence that demonstrated how cable operators valued each program category was, in the panel's view, the best evidence of marketplace value. The Nielsen study was not useful because it measured the wrong thing."

Now, were you familiar with that particular viewpoint when you prepared this present study?

A Yes, I was.

Q Are you aware of any evidence that a cable system operator, that cable system operators, excuse me, consider rankings -- excuse me. Let me take a sip of water and start all over again. Are you aware of any

evidence that cable system operators consider ratings when making the decision of which broadcast or which stations to license and which not to license?

A Well, certainly work that I've done for CSOs in the past, they look very closely at program viewership when negotiating and considering license agreements.

Q And describe for us what work you're referring to, generally.

A Sure. Actually, it's in the context of both a breach of contract, as well as license negotiations. I was retained on behalf of outside counsel for two separate CSOs, and in both those cases they were in a dispute with a basic cable channel concerning the programming on that channel. And some of the evidence they wanted me to look at was both how the programming changed over time and also how the viewership of those programming actually declined over time, and the CSOs were concerned about the decrease in viewership.

Q Okay. But that was after the fact of the decrease in viewership, correct? That was not a concern of theirs going into purchasing new broadcast --

A But it was part of the negotiations, so they wanted to, as they were negotiating with the basic cable channel, they were showing how viewership is decreasing; so, therefore, we want to lower our fees. So they certainly focused intently on viewership, at least in my limited experience.

Q Okay. If I could ask you to take a look at what's been marked as Exhibit 5 to the rebuttal testimony. I think that's the one on your left.

A This?

Q Yes. And for everyone, the complete information there, that is the IPG rebuttal to the MPAA's direct statement, Exhibit 5.

A I don't see an Exhibit 5 here. Oh, I'm sorry.

Q It's a one-pager, so it sometimes gets lost between the others. And the questions I'm going to ask you about this have to do with the concept of displacement, which you made some comments on in your direct examination, correct?

A Yes, I believe I was answering questions of the judges.

Q Okay. And this chart here is basically setting forth a situation in which you have issues of displacement, and you can see, by way of saying this, I'm essentially asking you a hypothetical. These are styled as two different options presented to a cable system operator. Option one is on top, and option two is on the bottom. And option one, as it says, contains children's programming, and option two contains talk shows for adults. And the Cartoon Network rating gets a 10 for the children's programming and a 20 for the talk show. The re-transmitted station rating gets a 10 for the children's programming and

a 4 for the talk show. I made a mistake. The cartoon rating gets a 20 for the talk show.

Now, you agree, and this is just this model, but under this model the aggregate rating is actually better for option two than option one, even though in option two you have a lower rating on the talk show, correct?

A This is a very simple table, but I'm having a difficult time following. Perhaps it's me. So what do we, I'm trying to figure out what's going on in these columns and rows.

Q Okay.

A So we have option one is -- well, tell me again. Option one is for station --

Q The idea is one is a cable system operator trying to make a choice between licensing either station KAAA in option one or station WBBB in option two. And these are the programs, for the sake of the analogy, that you can, that you're looking at.

A A 20 rating, it's a generous

rating. I'm sorry. Go on.

Q Well, it's a hypothetical. The point is is that, on the one hand, you may choose programming which has a lower rating for certain programming because you want the higher rating for other programming, just like the fact that for a particular time slot you may be choosing something with a lower rating.

A Well, yes. So you're referring to bundling of programs or --

Q Right. Because in these licenses, of course, one chooses a station and gets everything the station is offering. You can't pick a la carte between programs, correct?

A Correct, yes. So, ultimately, CSOs are choosing which signals to re-transmit. And so in order to really dive down at the value of the programming on those stations to the CSOs, you know, one has to do a little bit more sophisticated analysis.

Q And the fact of the matter is is that a CSO may be in a position where they

actually would choose to purchase programming, a station transmission rather, it contains certain programs that have lower ratings than competing options because, in total, due to displacement, the cable system operator is actually going to get what he feels is a better product, right? Even though it may contain lower-rated programs.

A That's possible. Then the question at hand is, you know, what is the relative market value of each of the programming. It gets a little complicated with the bundling, no doubt which I referred to in my direct testimony.

Q Right.

JUDGE STRICKLER: Can I interject a question?

MR. BOYDSTON: Yes.

JUDGE STRICKLER: You say it gets more complicated with regard to the bundling. I appreciate that. And you say you mention that in your direct testimony. But other than

mentioning it, did you incorporate that bundling difficulty in your analysis or is your analysis simply based on viewership alone?

THE WITNESS: I would say, with all due respect, both. And the reason why I say that -- if you disagree with me, please tell me and we'll have it out -- is that, ultimately, we're trying to calculate the relative market value of the programming and, therefore, the relative program for IPG versus MPAA. What we want to do is estimate, you know, how valuable each particular program might be to the CSO. So I like to abstract and say, okay, suppose that they were able to unbundle in some way --

JUDGE STRICKLER: So your assumption is, when you try to figure out relative marketplace value, you're looking at the value of each program unbundled?

THE WITNESS: Correct.

JUDGE STRICKLER: As if the re-

transmitter was, in essence, creating its own station by iteratively buying the rights to re-transmit various shows and might go down a list and say, oh, "Seinfeld," that's the most popular one, I'll take that one and then, after that, "Friends" or what have you and down a list simply to accumulate viewership. Is that a fair statement as to how you're looking at it?

THE WITNESS: It's a fair statement in terms of relative value because, in part -- let me give you another hypothetical. Imagine you had your programs that are very valuable, whether it be the Seinfelds, the what have you, "Jeopardy," for example, and so forth that people really watch in distant markets and on that signal in the middle of the night is some instructional show that nobody wants and nobody watches, I think that should be taken into account when determining the relative market value of the programming. And that's what my analysis

ultimately does. So it does, in a sense, unbundle, yes. Does that make sense?

JUDGE STRICKLER: It does make sense. If you look at it from the perspective of the CSO, the CSO wants to maximize subscribers at the end of the day, not viewers. Viewers, as you're saying, and correct me if you disagree, is a good proxy, viewers is a good proxy for subscribers and your regression bears that out. But if viewership is, in some sense, redundant -- and I may be misstating IPG's position but I'm trying to understand how you might respond to it. If viewership is, in some sense, redundant, which goes to this displacement point -- when I try to think of this myself, I think of shows that are somewhat similar that might be in reruns. I don't know. So you have, for example, "I Dream of Jeannie" and "Bewitched," as best as I can recall would seem to be the same exact show with almost the same theme music.

So if I'm a re-transmitter, I'm a cable system operator and I want to re-transmit, I've got "I Dream of Jeannie" and that gets me 10,000 viewers. If I'm interested in "Bewitched" or that horribly boring instructional show that you alluded to before, "Bewitched" may have 20 times the viewers of that horrible instruction show, but it may be the same viewers who you got from "I Dream of Jeannie," in which case the viewership doesn't -- and now we get into the economics of it. It's sort of like it's a marginal revenue product situation here. You're looking on the margin, and you're saying what additional revenue do I get from adding "Jeannie" to "Bewitched?" It doesn't matter that it's got a large viewership because the marginal revenue that it produces, in terms of subscribers, is zero because they're already locked in. And I understand it's a complicated process for a CSO, and we don't have one in front of us, but wouldn't I,

therefore, want the boring horribly-rated instructional show which might only give me another thousand viewers than a thousand more marginal viewers that, as an economist, you know what you're looking for is to try and maximize out the margin, not just to get more viewers.

THE WITNESS: Wonderful question. And the answer is, but the answer is I wouldn't call viewership a proxy for subscribers. I would actually call it a predictor of subscribers, and my analysis bears that out. And that's the big difference.

So the question at hand, you're right, is does this instructional show give any marginal subscribers, and that's why I did the analysis and referred to it, I guess that's in Appendix C.1 --

JUDGE STRICKLER: Is that the second analysis in your --

THE WITNESS: Correct, yes. And

so the question is, you know, is there something special about IPG's mix? And I think this is a more germane topic to Phase 1. But is there something special about IPG's mix of what have you, video, computer, and so forth, that increases, you know, subscribers, more marginal subscribers, and I just don't see it.

So it really appears to be two similar groups. And so if that's the case, insofar as subscribers do predict -- I'm sorry, not subscribers. Insofar as viewership does predict subscribers, then a CSO should want to get those programs that have, within the program supplier's context, that have viewership. And that's why I underscored the sort of homogeneity argument earlier, both verbally as well as written, is you definitely want to look for the relationship between viewership and subscriber and then see if that's somehow impacted by the different mixes that the two agencies have, and I just don't

see it. And so, therefore, let's go and look at viewership insofar as it predicts subscribers.

JUDGE STRICKLER: In your hypothetical, going back to basic fundamental principles that you talked about at the start, willing buyer and willing seller, you're willing seller is the owner of the copyright, the syndicator, if you will, perhaps, and the willing buyer is a hypothetical, it's a construct that doesn't really exist. It's a cable system operator buying a la carte shows, programs, titles, rather than buying the bundle, because they're, for the most part, looking at viewership. So it's unrealistic in that regard, but it's hypothetical, which may be what ultimately we have to apply is a hypothetical marketplace.

THE WITNESS: Right. And by definition, we have to apply some form of hypothetical market, just given the compulsory license scheme that distorts matters. I agree

with that.

JUDGE STRICKLER: But it's not the compulsory license that creates that hypothetical problem. It's the fact that you've got a bundle that gets re-transmitted. It's the market structure, not the fact that there's a statutory license. It's the fact that, in reality, the re-transmitter has to do an all or none, has to buy all or none, not the fact that there's a statutory license.

THE WITNESS: Right. Well, the fact that there's a statutory license, I guess, if there wasn't a statutory license, it's unclear what would happen. I agree, in all likelihood, it's the case that it would continue, that somehow the copyright owners would probably sell the right, and this is my guess as an economist, sell the right to re-transmit to those stations who are buying it. And then, you're right, there would be a degree of bundling but which might perturb the incentives, at this point, of the particular

buyers in that example.

JUDGE STRICKLER: So what you're saying is if you didn't have the compulsory license ex ante, the syndicators would sell the right to re-transmit when the program first airs, so we wouldn't have this sort of problem? But since that apparently doesn't happen, we have to do a hypothetical as to what would happen when the bundle is unbundled --

THE WITNESS: Right.

JUDGE STRICKLER: -- and you have discrete negotiations?

THE WITNESS: Right. And then -- I wish we were in Phase 1, quite frankly.

CHIEF JUDGE BARNETT: Oh, no, we're not going back.

THE WITNESS: Yes. But that's where the, in some sense, the very important bundling is done is with respect to Phase 1. So when you're a, when you're choosing, as a CSO, which signals to re-transmit, you're

looking at the sports, whoever else is here, and so forth. But now I have to somehow abstract from that. And so to start talking about talk shows for syndication bundling seems less likely that the CSO is really going to go to, based on CSOs I've worked for in the past, that level of detail of consternation.

But ultimately, insofar as we're in Phase 2, it just seems intuitive that, after you check, and it's important to check that there's not some form of marginal contribution difference, let's use this measure of program viewership.

JUDGE STRICKLER: That marginal analysis is what's in the second part of your Exhibit C.1?

THE WITNESS: Correct. I wish I had a lot more data to look at the margin analysis because it is critical, yes.

MR. BOYDSTON: Thank you.

BY MR. BOYDSTON:

Q And to a couple of those points.

Well, first off, it's accurate that higher ratings for re-transmitted stations don't translate into higher ratings for the cable system, do they?

A Oh, distant viewing is small, so yes.

Q And just as a parallel, do you have any familiarity with ASCAP and BMI distribution systems?

A I do. I've consulted for both.

Q I thought you might. Obviously, it's kind of a related, it's a related situation because they're also --

A Well, they're both performance rights organizations, so I mentioned PROs earlier.

Q Right. And they, essentially, operate under a compulsory license type system, correct?

A Well, a blanket license really is where I deal with it. In fact, before we have this compulsory license, I suspect we'd be in

some form of blanket license. That's what I was kind of hinting at before, but yes.

Q And in the distributions under those schemes, they're not based on popularity of the material, of the songs, are they?

A Those get so -- I don't -- that's a different ball of wax, quite frankly.

Q Well, they're based more on the broadcasts that are made, rather than where they are on the charts, correct? A given song.

A Well, people negotiate differently with respect to those, like, for example, sometimes the PROs are interested in just getting the fraction of total revenues for the company that happens to use the songs that are in the repertoire of the PROs. So it's an entirely different market, I think.

Q But, most commonly, the basis is not upon, in the music context, the basis is not on popularity, is it? It's on degree of broadcasts. Sometimes, there may be a

special, there may be a unique deal like you're referring to; but, most commonly, it's not, the compensation is not based on popularity of a song, is it?

A That's a simplification because, ultimately, popularity matters, even when determining blanket licenses, because you are buying the right. It's a blanket license to play any particular song from this large library. But when you value that, it's important to know what's in the library, and you're saying, you know, there are unpopular songs and popular songs. I don't know the difference anymore, but the blanket license fee applies to all of them. So I'm not quite -- it seems completely different to what we're talking about here, but I can grab a cup of coffee and talk all day about it if you want.

Q Well, when a copyright owner licenses his material to a station, the license fee is not contingent upon the subsequent ratings, is it? In other words,

and I'm not talking about compulsory license situation, I'm talking about I own a TV show and I go to a local station and I say, "I'll sell you ten episodes for a hundred grand," the deal that's cut is not, "Well, we'll only give you a hundred grand if you get this kind of a rating." That's not the way that business works, is it?

A It's typically based on expectations, and then there are often re-negotiations when those expectations are not met and/or cancellations.

JUDGE STRICKLER: Are there ever earn-outs or situations where there's a base fee and the license fee can either be higher or a reduction off the base, depending on how the ratings turn out ex post?

THE WITNESS: You know, I've never been in that kind of negotiation. I like the way you think. There should be is the answer. I've not been in those type of negotiations, but I defer to someone who has been.

BY MR. BOYDSTON:

Q Let's discuss the interplay of the data that you have on the local meters and the data that you have from the distant diaries, and we talked about this enough that we both know what each other is talking about when we refer to those, right?

A I know what you're now talking about, yes.

Q Okay, good. Now, what happens in a -- and, again, in the confines of your study, there's 70 programs or 70 stations, I should say, where stations from your list coincide with stations from Ms. Kessler's list, so that's the local versus distant connection on 70 stations, right?

A Correct.

Q Okay. Now, what happens if we're dealing with a particular program that doesn't, isn't registered by one of those 70 stations on a local meter? Fair enough?

A Oh, it's not in the local?

Q Not in the local. Right.
A So it's a program that's not in my random sample?
Q Right, exactly.
A Okay.
Q And then, at the same time, that same program, there are no diaries for it for six months out of the year because the particular dates fall within times outside the sweeps period, right?
A Yes.
Q Now, in that situation, it occurs to me that you don't have a coefficient for local whatsoever and you don't have a coefficient for distant whatsoever. In that situation, for that particular broadcast, how can you make, drive a relationship between local ratings and distant ratings when you have neither one in that particular example? Don't you have to use something from the, something in the 70 to graft onto that?
A Yes, I think you're a little

confused, so let me try and clarify, which is your hypothetical is a program that's not on my random sample, so my entire projections are based upon programming that's within my random sample, the 120 stations per year. So you're referring to a program that might be on station, you know, 203. I do not estimate programming for that station, so it's irrelevant.
Q Right. You used what you develop from the 70 to make a projection on what that program is worth?
A No. If it's not in my random sample of 120 then I will not make any projections for it.
Q Then how do we know what that broadcast is worth under your methodology?
A Well, ultimately it's this: it's because I'm calculating the relative viewership share of IPG and MPAA programming and, therefore, relative royalty share. And I calculate from a random sample what that

relative share is, and that's for approximately 120 stations per year. So in any given year, I calculate the percentage. Say it's 99.80 percent. That's applied then --
Q Across the board.
A -- across the board because that winds up being the royalty share allocation.
Q But that means -- and it's not 125. It's really 70 stations, right?
A No, it's 120 stations.
Q Well, but I thought there were only 70 stations where you have data, where you have an interconnection between the two databases.
A Again, I make projections for, I give estimates of distant viewing for shows on approximately 120 stations each year, 2000, 2001, 2002, 2003, seven days a week, 24 hours a day, every year. And so it is that estimate of distant viewing that goes into the calculation of overall viewership shares and

royalty shares.
Q Even in that case then, what you're basically doing is you're taking 125 stations and you're grafting the circumstances from that as between IPG and MPAA across everything outside of those 125 stations, correct?
A Yes. That's why it's critical that they're randomly chose.
Q Now, the IPG approach says, rather than take 125 stations and, from that, extrapolate it onto everything else, takes up to 200 - 230 stations, which then is comprising a vast majority of all programming. In fact, some 17,000 individual programs versus 3,000 something in --
MR. MACLEAN: Objection. Counsel is testifying.
MR. BOYDSTON: I'm giving, I'm giving him a hypothetical. I'm asking him to confirm that this is his testimony. I'll start all over if you want and then --

CHIEF JUDGE BARNETT: Start all over.

MR. BOYDSTON: Sure.

CHIEF JUDGE BARNETT: Sustained. Ask the question, Mr. Boydston.

BY MR. BOYDSTON:

Q Is it not the case that -- scratch that. Why extrapolate across the board off 125 stations when you could extrapolate across the board using 230 stations, which comprise 90 percent of all programs?

A Because of the 10 percent of programs.

Q Yes, but in the 125 example you're only talking about some 3,000 programs versus 17,000 programs. So what about those other 14,000 programs that are picked up when you have 225 or 230?

A Well, I don't necessarily agree with you on the program count. We can talk about that later. But the key, and I've tried to underscore it, maybe I didn't sufficiently

enough, is the word random. I'll pause for effect. It's critical that the sample is randomly chosen. That's the only way to make statistically valid inferences and projections outside the sample. And so my 120-plus stations per year are randomly chosen, and then, ultimately, then I get my overall royalty share that is validly applicable outside those stations.

Q However, you still end up using the Kessler stations, which are not random, which brings an element of randomness into your approach which then you try to remedy by looking at the quartiles of the Kessler selection, correct?

JUDGE STRICKLER: You mean that brings in an element of non-randomness.

MR. BOYDSTON: Thank you.

THE WITNESS: I debated whether or not to correct you.

MR. BOYDSTON: I appreciate that.

THE WITNESS: Well, as I testified

before, that's why I was very careful and ran lots of tests to check on the impact of using the diary information from the Kessler sample.

BY MR. BOYDSTON:

Q And those quartile tests, we're talking about a quartile of the Kessler stations, correct?

A Correct, yes.

Q And so we're talking about a low of 20 and a high of maybe 25 stations in those quartile tests, correct?

A Right. With perhaps two-hundred fifty, three-hundred thousand quarter hour of broadcasts, which is a lot of data.

Q Well, but it's only 20 or 25 stations, and we're dealing with a population here of about 900-plus stations, correct?

A Again, the question at hand is, as you sort of use stations with very different levels of distant subscribers, is there a material impact on the estimate of the relationship between local ratings and distant

viewing and other factors? And I didn't see it. And as an econometrician, I didn't have any concern, or I should say it eased concerns that I did have with confusing --

Q I, I --

A Allow me to finish, please. With respect to using the distant viewer data.

Q But if the answer is yes to my question, I believe, that means these quartiles or 20 to 25 stations to check the ability to make a prediction or a value that spreads over 900 stations. True or false, those are the numbers involved?

A Again, that's why I tried to finish is --

Q Is the answer no?

A No, the answer is I'm using those to look at the specification of the regression. And so I'm not using the quartiles to make predictions. I'm using them to test the reasonableness and the robustness of the regression, and I found the regression

model to be robust with the exception of WGN, and that's the very reason why I had a separate regression run for WGN. So I was very cognizant of the issues associated with the Kessler sample and took steps to make sure it was not a concern.

I even looked at the lower decile, too, if you want to make the sample even smaller. That might, you know, raise concern on your part, but I think one has to look at these things.

Q But you don't quarrel factually with the numbers I'm talking about when I say 20 to 25 and 900?

A Well, those are numbers, but I don't see the relevance of them.

Q Okay.

A I quarrel with relevance, I suppose.

Q Now, Nielsen data does not distinguish demographic groups, does it?

A No, it does not. I should say not

the data that I receive with respect to the diary. Other Nielsen data does.

Q And isn't it true that, for advertising purposes, demographics are an important aspect of what advertising rates are, correct?

A Yes.

Q And, in fact, ratings are only significant to the extent of the demographic which they are representing, correct? Or advertising --

A Yes, advertising --

Q I am.

A Yes. And, actually, advertising revenue is of concern directly to CSOs, as well. But I think the subscriber count, perhaps, is more important.

Q And wasn't this -- well, let me, I'm going to read a small section from you here from the 1989 decision. It's 57 Fed Reg at 15.301. "The Nielsen study improved the analyses greatly and gave the 1983 Tribunal

what it calls it's starting point. Why was it only a starting point and not the final answer? Because we recognized that viewing, per se, did not necessarily correspond to marketplace value. Even in the broadcast industry which relies heavily on viewing data, ratings do not precisely predict value because the viewers' age, income, and other demographics. However, in the cable industry, viewing is even a lesser predictor of value, as discussed earlier. Cable's goal is to attract and retain subscribers and will offer niche services, often unrelated to the volume of viewing, to induce segments of the population to subscribe."

Now, based on that logic in that quotation and what we were just talking about, doesn't that raise serious questions as to the impact of ratings on determining value?

A What I would say, based upon in my listening to that quote, that quote says pleas run regression and put it in Appendix C.2.

Q Please do your study.

A But yes.

Q Although it's certainly critical of a focus on viewership to determine value, correct?

A Well, it said it's a starting point, and it said you should certainly take, you know, look at subscribers. And it also referenced broadcast issues, as well, which may or may not be relevant.

JUDGE STRICKLER: Counsel, just before you go on, we got onto the topic of advertising revenue for a moment. I don't want to lose the point because I have a question, and I don't know if this witness has the answer for me. But do CSOs sell advertising time or receive advertising revenue for re-transmitted stations?

THE WITNESS: Actually, my understanding is it might cannibalize some of the advertising revenues they get on other stations they carry. My understanding is that

they do not, but I should say that's my understanding. I'm not an expert with respect to how the advertising revenue from digitally re-transmitted programs --

JUDGE STRICKLER: It's your understanding that, for example, if WPIX out of New York was re-transmitted out to Los Angeles, that there's no new advertising that shows up in Los Angeles. It's the same advertising that was showing up in WPIX in New York?

THE WITNESS: Correct. That's my understanding.

BY MR. BOYDSTON:

Q How did you decide how many stations to use in this MPAA study?

A I was actually debating. There was a balance between more is better and cost, and I was estimating that 120, just based upon some calculations that I did well over a year ago, would likely yield relatively precise estimates. But whenever you choose a sample

size, I tell clients time and time again it's more of an art sometimes than science. So you don't know how precise it's going to be until you get the data, and, well, actually, I'm suspecting that 100 or 120 should be sufficient to give me a 95-percent confidence interval with a couple-point swings is what I estimated based upon some prior information that I had.

Q And what was the prior information?

A I think it was information from, you know, prior studies.

Q Prior MPAA studies?

A Yes, correct. So, yes, it really just had to do with what, historically, what's the MPAA's share of viewing and, therefore, what fraction, what percentage am I likely to get in this study; and, therefore, how many samples do I need in order to have a reasonably tight confidence interval with respect to that?

Q Just to use a number to work with, I think in your testimony you were critical of IPG in terms of its station population. And as I recall in that critique, I think you identified approximately the number of Form 3 stations during this time period of 2000 - 2003. Does that sound familiar? Was it fair to say it's something on the order of 900 stations during this time period?

A I don't recall being critical of the number of stations they selected. I was critical of how they selected the stations.

Q Fair enough. That's not really where I'm going. Where I'm going is can we agree that the number of Form 3 re-transmitted stations at issue during this time period was about 900 or 900 and change?

A That's my recollection, yes.

Q Mine, too, for what it's worth. Now, you referred to coming, you know, using prior studies, prior MPAA studies to come up with your number of stations in this study.

Do you recall the number of stations the MPAA was using in the 1983 proceedings? I don't want to play 20 questions. Let me represent to you that it was 117. Does that sound somewhere within the ballpark?

A That's my vague recollection, yes.

Q Now, at that time, do you have a sense as to what the population of re-transmitted stations was at that time?

A Sitting here today, I don't recall.

Q Okay. Would 600 some-odd stations sound about right?

A It could be right. I'd want to check. As far as this is on the record, I would say I don't exactly recall.

Q Fair enough. I'll represent to you, for what it's worth, that it was. If I'm wrong, someone will point it out, I know. So the difference in stations is something on the order of 50 percent, 600 and something to 900 something, between the `83 MPAA study and the

current time period of the MPAA study. Yet, the number of stations is only a few more. Instead of 117, you've got 125. Did you take that sort of thing into consideration? Because it seems to me if you had you would have picked more stations than 125 is the point.

A No, this is one of those nuances of sampling is that, as the population gets larger and larger, your necessary sample size in order to get the same confidence interval does not change by very much.

Q Well, do you recall -- I'll read you a brief quote from the `83 cable proceedings decision. It says that the MPAA "conceded that its study, which used 117 stations, cannot be perfectly projected to the other stations, even for Phase 1 purposes," suggesting that 117 was too few. If 117 was too few at 600-something stations, wouldn't 125 be too few at 900 stations?

A I'd have to see the context of the

quote. I suspect they're saying 117 can't be projected from because it was non-randomly chosen, but I'd have to see the context of the quote. If it was randomly chosen, there's a good chance that you could project to the other 600. In fact, I certainly could have.

Q What if it was randomly chosen?

A Again, that's, that was my -- I just answered that.

Q Sorry. You're right. Now, I'm going to ask you, and, if you remember, great, if you don't -- I just want to get a sense from you, I'm bandying about the number of stations, the number Nielsen diary stations for the various years, and I'll read these to you and just tell me if you think they're out of whack. But I think they've been documented, but is it not the case that in 2000 the Nielsen diary stations sampled were 81, in 2001 it was 99, 2002 it was 122. And then in 2003, that's when it reached its high point of 125; is that correct?

A It sounds like you're referring now to the Kessler sample of --

Q Yes, you're right. This is the Nielsen diary stations --

A Yes, that sounds just about right for the Kessler sample.

Q Do you think it's a mistake to continue to use fewer, you know -- and I'm focusing on the Kessler set now but I think it applies somewhat to the set of yours, as well. Don't you think it's an error to be using another station that's less than the MPAA has been criticized for in the past, on past studies? In other words, to the extent that the MPAA has been criticized in the past for a number of studies being used, and then it goes forward using less than that, isn't that a problem?

A Not necessarily. I think a big criticism, you know, with all due respect to Kessler's sampling strategy, you know -- I'm saying the same thing over and over again. I

apologize for those of you up here and over here. The big criticism I have from the Kessler study is it's not randomly chosen. The fact that she went from 80 to 130, I'd much rather have 80 randomly chosen every single year than 200 non-randomly chosen.

JUDGE STRICKLER: A question in that regard, in regard to the Kessler non-random sample. When you found out what the sample was and how it was constructed, that is not randomly, before you figured out how you could go about ameliorating the problems with that, as you've already testified to, did you go back to MPAA and say, "This isn't really what you should be doing. You really need to do a random sampling. Why don't you go sample again?" before you went ahead to try to fix it?

THE WITNESS: Well, actually, what they said, quite frankly, you know -- this isn't closed door so I'm trying to decide how much to say. But they said, "Well, you know,

it captures," I can't remember, "70 to 80 percent, you know, or maybe more. Can't you just say that that's enough?" and the number of times I said, no, you can't, like I'm doing today, they finally said, okay, what else can we do?

So you're saying why didn't we go back and do another diary data. Is that your question?

JUDGE STRICKLER: Well, yes, but you said something, and I'm trying to figure out exactly what you meant when you said when it was behind closed doors, so I want to figure out how much I actually want to tell you. I want you to tell me everything. So why didn't you tell me it was said behind closed doors if you were editing your answer?

THE WITNESS: Oh, no, I wasn't really editing the answer, other than they were encouraging, they were really encouraging me to try to use the Kessler sample and not necessarily go on, you know, and get this

local ratings sample that's randomly chosen.

And I said that that really helps solve two things. One is, you know, the interpolations we could talk about was done in 1989, and it made my head spin when I read about it. So that needed to be improved, and you could do that with the local ratings data. Insofar as there's statistically significant correlation, and this was at high north, I said then I might be able to mop up and use this Kessler data. I said I'm not sure but there's a good chance I'll able to.

JUDGE STRICKLER: Did they tell you behind closed doors why it was that they wanted to continue to use the Kessler study after you explained to them that the non-randomness was a problem?

THE WITNESS: Well, I inferred it was cost. I don't think they said that, but, you know, I inferred that they didn't necessarily want to go back to Nielsen and get a bunch of local ratings data because I don't

know what Nielsen charges, but I'm sure it's non-zero. So I suspect it -- I didn't ask that.

JUDGE STRICKLER: You inferred that. Nobody implied that? Well, I don't mean by the cost, but, I mean, you say it was a cost function. I don't mean to make light of it. You inferred that, but was there anything said as to why they wanted to keep the Kessler non-random sample in the analysis? You inferred it was cost. Was there anything said explicitly?

THE WITNESS: Nothing said explicitly. They were just, you know, kind of pushing me to use it, and I said that, you know, you can push somebody else, if you will, so . . .

JUDGE STRICKLER: Who pushed you?

THE WITNESS: Well, not a push.

JUDGE STRICKLER: I don't mean it in the aggressive sense, but who was it that was urging you? Was it Ms. Kessler herself?

THE WITNESS: No.

JUDGE STRICKLER: Do you recall who it was?

THE WITNESS: I feel like I'm being cross-examined, but I suppose I am. No, ultimately, it was actually, counsel for MPAA was saying, you know, can you use this, and so it wasn't really a push. And I just said, no, I can't, not without additional data. So, yes, no one from MPAA actually was twisting my arm, but, based upon the back and forth, I presumed, you know, either it was time or money that they didn't want to go out and get more data.

JUDGE STRICKLER: But whatever the reasons, no one at MPAA, counsel or otherwise, had said why it was --

THE WITNESS: Oh, no, I don't have any dirty dark secrets. I apologize.

BY MR. BOYDSTON:

Q Given the answers you just gave and given the fact that yesterday, when asked

who the architect of this study was, Ms. Kessler said, "I believe his name is Carson," a man who's since passed away, would you change your answer at all to the question as to who designed this study?

A Which study are you referring to now?

Q This study, the one you called your study.

A Yes. No, it's my study. I didn't talk to Mr. Carston you said?

Q Well, he's deceased now, I understand.

A Yes. Well, I didn't talk to him pre- or post-deceased.

Q Isn't it accurate, isn't it accurate that sampling fewer stations means that fewer programs are accorded royalties under the MPAA methodology?

A I would think not now. I don't think that's accurate. Again, we're calculating shares.

Q Well, you've analyzed the IPG study, correct?

A I've reviewed the IPG study, yes.

Q Would you disagree with me that the IPG study, for all its problems according to you, does accord royalties and does justify the payment of royalties on more programs than the MPAA methodology does?

A I'm not aware of that. You know, there's nothing -- I'm familiar with the actual payment of royalties. My understanding is we're calculating the royalty shares attributable.

Q That's a better word, yes. I apologize. My nomenclature was off. I'll try it again.

A And so, for example, my understanding is, you know, the titles that comprise MPAA's viewing share is not going to be all the titles that receive payment for their re-transmissions for those copyrighted or, sorry, yes, copyrighted materials.

Q Do you disagree, would you disagree with the proposition that the number of different programs encompassed by the stations covered by the IPG list of stations of 200 to 235 is multiple times as many stations as are encompassed by these stations in the MPAA study?

A I would disagree with that premise.

Q Okay. Have you done a calculation as far as that goes?

A Yes, I have.

Q And what is your conclusion in that regard?

A If you look at MPAA and IPG compensable programming, you'll see that 120 random stations actually have more MPAA and IPG compensable programming per year than does the 200-plus stations in the IPG sample.

Q Okay. Now, isn't it true that, in 2003, your various worksheets reflect the fact that you actually started with 128 stations,

not 125 stations and that three were knocked off because they had 100-percent zero viewing? Does that ring a bell?

A No, it does not.

Q Do you recall that in the 2002 diary sample, the Nielsen data that was produced included five stations with 100-percent zero viewing? Do you recall that?

A I recall that there was, we did have some stations that might have been non-commercial stations, but I would have to go and double-check.

Q Did you run any analysis in order to determine the existence of zero-viewing data that you relied on for the MPAA viewer study?

A By zero viewing, you mean non-recorded viewing in the Nielsen diary data?

Q Correct.

A Yes, I have absolutely no problem with the instances of zero viewing or non-recorded viewing in the Nielsen diary data,

and that's the big reason why I did a regression analysis to predict viewing.

Q I appreciate that. My question was just slightly a little bit different, which was did you run an analysis of the amount of zero viewing? I understand you have a problem with it. That's not the question. The question is did you run an analysis to determine how much of it there was?

A I don't know if I looked at the number of zeros, per se, but certainly spent a lot of time sort of rolling up my sleeves and looking at the data. It's one reason why, you know, the particular regression specification I chose was chosen in order to take into consideration the instances of zeros.

Q And I apologize. It may just be my fatigue at the moment. So was that a yes or a no or is it neither? Did you run an analysis to --

A Well, the answer was no Nielsen,

per se, in terms of counting the number of zeros.

Q Okay.

A However, I did analyze just the whole pattern of distant viewing in the Nielsen diary data, and one of the reasons why I chose the regression specification that I did had to do with the number of zeros in terms of reviewing. But that's some --

Q Got it. For my simple point, no, you didn't do a tabulation or a calculation of how much the reviewing was going on, correct?

A Sometimes, yeses and nos don't quite cut it.

Q Well, yes, sometimes they do. Did you do that or not? I've asked you five times, and you're not really telling me. I just want to know did you actually do it or you didn't. If you didn't, fair enough.

A Well, that's why I was trying to answer lucidly, and I suppose I didn't, which is this: I definitely looked at the pattern of

distant viewing, and so I would have noticed -- I don't know if I counted the exact number of zeros, but there's certainly a lot of zero or non-recorded viewing, and that's one reason, you know, that we ran the, not just multiple regression analysis but Poisson regression analysis, yes.

Q So we know from the prior decision that the 1997 proceedings, decision of 2001, September, said if the MPAA is going to continue to go down this path, it needs to bring zero viewing into line, and, yet, you never calculated the incidents, the amount, the number of zero viewing instances in these years, correct?

A Again, let me --

MR. MACLEAN: Objection, mischaracterization of the decision. And at any rate, that's asking for a legal opinion.

MR. BOYDSTON: Well, it's not a mischaracterization of the opinion.

CHIEF JUDGE BARNETT: It's been

asked and answered.

MR. BOYDSTON: Very well.

BY MR. BOYDSTON:

Q I may have covered this previously. If I did, I apologize. Sometimes the witnesses run together a tad. Do you recall that in the 1997 decision it was found that the aggregate of zero viewing equaled 73 percent?

A That could well be.

Q Okay. And I mentioned before that that decision directed the MPAA to reduce the incidence of zero viewing. All things aside, do you have a recollection of that or not?

A I don't have a recollection of that, no.

Q Okay. So as far as you knew, there was no directive to the MPAA to decrease the incidence of zero viewing, correct?

A I'd hope the directive would be to address the issues, and that's one thing that I do with my chosen regression specification.

Q Well, I'll read you a short sentence from the `97 decision, "In the future, if the MPAA is going to use Nielsen ratings, it must reduce the incidence of zero viewing or provide an acceptable explanation for the high incidence of zero viewing." Does that sound familiar to you or no?

A Well, I love the second part of that, though. I'd be happy to talk about an acceptable reason for the zeros.

Q I understand. The question is just were you familiar with that directive overall?

A I got excited about the second part. They said something nice. I'm sorry. The question is am I familiar with that?

Q Yes, were you familiar with that directive in that decision?

A I read that sometime ago, yes.

Q Okay.

JUDGE STRICKLER: Which decision? Can you give us the cite on that again,

please?

MR. BOYDSTON: Yes. That's the September 2001 order in the 1997 proceedings.

JUDGE STRICKLER: Do you have the Federal Register cite?

MR. BOYDSTON: I do not have it at this time. I will give it to you right after the break; how about that?

JUDGE STRICKLER: If you have it. Otherwise, I can get it, but thank you.

MR. BOYDSTON: I'll get it. I just, under the gun at the moment, I don't have it.

BY MR. BOYDSTON:

Q Did you make any efforts in this study to try to reduce -- and I understand your opinion zero viewing, I understand it doesn't bother you, and I understand you have no problem with it, so I'm not asking you about that. My question is simply did you do anything in your study to try to reduce the incidence of zero viewing, or are you aware of

whether or not Nielsen did anything to do that?

A Well, I did definitely. And that's this: you know, the regression specification results that I described earlier, let me give you some of the findings because, again, I am estimating with my regression distant viewing on a program-by-program basis so I can now tell you how often I have zero viewing. I can tell you this: in over 99-percent of the programs in my random sample there were multiple houses predicted to have distant viewing. So I would say distant viewing has decreased to less than one percent, based upon my analysis.

JUDGE STRICKLER: What has been reduced to less than one percent?

THE WITNESS: Oh, instances of zero distant viewing.

JUDGE FEDER: Excuse me. Instances by program, by station?

THE WITNESS: By program.

Actually, specific, to be technical, by quarter-hour of program, but that would be by program, as well.

JUDGE FEDER: Thank you.

JUDGE STRICKLER: What did you say the incidence was of zero viewing in your study?

THE WITNESS: I can tell you that this part, it's more than 99 percent or multiple. It's multiple households. The actual zeros, it's less than half percent. I can get that calculation for you.

MR. BOYDSTON: Judge Strickler, I have that citation. 66 Fed Reg 66449. It's at the bottom of the middle column.

JUDGE STRICKLER: Thank you.

MS. PLOVNICK: Your Honor, if I may, that decision was actually admitted as a preliminary hearing exhibit. It's number was 306, and it's vacation was admitted as Exhibit 307, so you should have copies in the record.

JUDGE STRICKLER: Thank you.

BY MR. BOYDSTON:

Q You've reviewed the testimony of Mr. Galaz, and I don't know if I asked you this before: did you also review the testimony of Laura Robinson?

A Yes, I have, both of them.

Q Do you have any disagreement with the representations in those testimonies that the 2000 - 2003 Nielsen diary data aggregate zero viewing ranged between 78 percent and 82 percent?

A Again, yes, that's for the Nielsen diary data including both compensable and non-compensable programming, so that is including programming that is not at issue in this proceeding.

Q But the answer is you don't have an issue with --

A I don't have an issue with it. The only issue I have would be with the relevancy, I suppose.

Q Do you have any -- do you disagree

that the range of zero viewing for stations in the MPAA viewer study was between less than one percent and as much as 99.9 percent?

A I'm sorry. Can you repeat that question?

Q Yes, sure. That the range of zero viewing incidences amongst the stations in the MPAA study went from as low as one percent to as high as 99.9 percent.

A Yes, I'm not sure how that's been calculated, so I'd have to -- by the MPAA study, are you referring to the Nielsen data now?

Q Yes. The stations used in the MPAA study from Nielsen, correct.

A Yes, because there's confusion with respect to what you're calling the MPAA study. You're often pointing to the Kessler samples, so it sounds like -- are you now pointing to the Kessler sample?

Q My apologies. Yes, it would be the Kessler sample.

A I'd have to double-check. I know that there are instances in the Kessler sample where she has stations with almost 100-percent zero viewing that are not in my sample. I think you might have referred to some of those earlier. So, again, I think it's important to focus on the approximately 120 random selected stations each year.

Q To the extent --

A That's what my conclusions ultimately are based on.

Q To the extent that the incidence of zero viewing found in the MPAA study or the MPAA stations from Nielsen were, excuse me, 73 percent in the 1997 proceeding and for the years in this proceeding are 78 percent to 82 percent, it would seem a simple matter of acknowledging the numbers that the incidence of zero viewing in these years is higher than that for the `97 proceeding, correct?

A No. Again, two things. Number one is your statistics are referring to

programming that's not at issue in this proceeding is my understanding. And, secondly, most importantly, you know, if you read back the quote you gave me earlier, we took steps to address the instances of zero recorded viewer.

Q But those steps were taken by you after you received the Nielsen information, correct?

A That's correct, too, yes.

Q And the Nielsen information itself did have those incidences of zero viewing we're talking about, up to 82 percent in this proceeding and 73 percent in the prior? And I know that you did things to them after that. I'm not asking about that. I'm asking about what came out of Nielsen was in those numbers, correct?

A I had a fewer, as I recall, I had a fewer percentage of incidences of zero or non-recorded viewing in my samples. I don't recall the exact numbers.

Q Okay. Well, were you aware of what those numbers were in the Kessler sample?

A I don't see the relevance.

Q Well, that's kind of for everybody else to decide. Do you know what those numbers were was the question, not whether you think they're relevant.

A Oh, I don't, you know, disagree with your representation.

Q That the incidence of zero viewing in the Nielsen numbers for these years is higher than it was for the `97 year, correct?

A Right. And, again, to me, that's data that I don't rely upon in my testimony.

JUDGE STRICKLER: If I may, I have a question with regard to that. So you're acknowledging that 78 to 82 percent of the Nielsen figures show zero viewing, and you said that included compensable programming in this proceeding and certain non-compensable, and the non-compensables would be because it was local or network or Canadian or Mexican,

and they didn't qualify. What part of that, if you know, what part of that 78 to 82 percent for the Nielsen survey that showed zero viewership was out of the compensable category and what part of it was out of the non-compensable category?

THE WITNESS: I could determine that. I don't know sitting here.

JUDGE STRICKLER: Could determine it.

THE WITNESS: Yes, I could --

JUDGE STRICKLER: How would you determine it?

THE WITNESS: Oh, with the data. So in the data, all their statistics are based upon, you know, the raw Kessler diary data, and so I'd restrict that down to the compensable programming and calculate the zeros.

JUDGE STRICKLER: You know the 78 to 82 percent includes both, but the allocation that's between compensable and non-

compensable is not something that you know sitting here today?

THE WITNESS: Not sitting here today, no.

JUDGE STRICKLER: When you found out about the existence of the zero viewing, was it important to you to be able to distinguish what portion of it came out of the compensable programming and what portion of it came out of the non-compensable programming?

THE WITNESS: Often, not particularly because I'm just focusing on the compensable programming category. You know, the zero viewing, let me do a little analogy. I want to make sure we're all on the same page.

And this is the way I think of what Nielsen is up to is imagine, if you will, you want to know how many people in the U.S. are left-handed, and so you can go to four, five different cities and randomly select four people and say, "Are you left-handed?" In

four of those studies, the four people you randomly select are not left-handed. They're all right-handed. Not a shock. But then one city, Chicago perhaps, two of the four are left-handed.

And so what happens is in the aggregate you have 2 out of 20, which is 10 percent. That's about what you see in terms of left-handedness in the U.S. as a whole. And there's this focus and focus on you have four out of five cities where there's no left-handed people.

Two things. There are left-handed people in those four cities. They're just not in the sample. So it's very important what Nielsen, I think, says -- I wish I listened to Paul Lindstrom, he probably would be more eloquent than I am -- is it's critical to aggregate up the information before you draw inferences and conclusions. So if you aggregate up this little hypothetical into the 20 people, you get 10 percent; or you can run

regressions and predict in every single city what fraction of people are left-handed and you'll predict around 10 percent in every city.

So to answer your question in a very long-winded way, and I apologize for that, was I concerned about the instances of zero viewing? No, because distant viewing is something that, it's relatively light and unusual. I don't know if I've ever actually done it.

And so it's no surprise at all, given the number of choices, how often we see televisions not tuned to these programs. But that's one of the reasons I did the Poisson regression is to acknowledge that it's sort of right skewed for lots of people in that tail.

CHIEF JUDGE BARNETT: On that happy note, we're going to take our afternoon recess, 15 minutes.

(Whereupon, the foregoing matter went off the record at 2:52 p.m. and went back

on the record at 3:12 p.m.)

CHIEF JUDGE BARNETT: Mr. Boydston?

MR. BOYDSTON: Thank you, Your Honor.

BY MR. BOYDSTON:

Q In our discussions about zero viewing, you stated in response to one of my questions that in your final analysis you only detected zero viewing at one percent of the time. Or you only -- you only had detected or assigned zero viewing at one percent. Do you recall that?

A For less than one percent.

Q For less than one percent. Now --

A Of quarter-hour -- of broadcasts on a quarter-hour basis I should say, but yes.

Q Okay. Now, to the extent that the raw Nielsen data for the four to six months during this time period ranged from 78 to 82 percent, for four months that we knew about, and your regression analysis was going back to

fill in the blanks for the eight to -- for I guess six to eight months we don't know about, how do you get something so low as less than one percent if we know during four months it's as high as 82 percent?

And, I mean, and I'll just give you -- and this is my simple math, and you can give me the more complex math. If you've got -- I'll just, you know, 78 to 82, I'll say 80. It's also handy because it's a round number.

If we know from the Nielsen data that for four months out of the year we got 80 percent zero viewing incidences, let's say that in your regression analysis for the other eight, you determine there is zero viewing, well, that would mean that for eight months you have zero zero viewing, and for four months you have 80 percent zero viewing.

When you average that out, it seems to me that it would still come to much more than a couple percent. So tell me why I'm wrong.

A It goes back to my description of my methodology. I won't repeat it, but it's the third thing. So the regression is used to do three things. One, as you intimated, it's to predict what distant viewing is for the non-sweeps months, which is about six months a year.

Also used it to predict what distant viewing is in those instances that I don't have distant viewing information even during the sweeps months.

And the third one, and I try to stress the one that I said was subtle, yet very important, is even in those instances where we have Nielsen diary data on distant viewing, I used the regression model to predict what distant viewing is or expected to be in those instances.

And the reason why I do it, I said -- and go back and read my own testimony -- is that those Nielsen diary estimations of distant viewing on those -- sort of those

small cells of programs, or quarter-hour programs, are based on relatively small samples.

So I want to use a lot more data -- just like my left-handed example -- a lot more data to predict what distant viewing really was. So, actually, I predict positive distant viewing in -- for programs on a quarter-hour basis when Nielsen's relatively small sample says there is zero distant viewing.

Q So what you're saying, then, although the actual Nielsen data for four of these months may say 80 percent zero viewing, what you are doing by trying to come up with a bigger database is go back and basically say, "That's what that says, but, really, that is not what it is. It's really less than -- it's less than one percent."

A Right. And let me give you one example.

Q Right? That's correct? I don't

know if I'm saying it right. Did I say it correctly?

A Well, repeat the question. I want to make sure I --

Q Yeah. You said "right" real quick, and then you jumped off, and I didn't know --

A I apologize.

Q We've got this data from Nielsen that says for these four months zero viewing is 80 percent. My understanding of your explanation is that what you do is you aggregate together more information than just that particular body of data that says 80 percent viewing, 80 percent zero viewing.

And with that bigger body of data, you reanalyze your zero viewing. And when you did that, you found that for that same period where the raw Nielsen data said 80 percent zero viewing, when you had this bigger aggregate number it was only one percent.

Did I say that more or less

correctly?

A More or less. And the critical part there -- and I just want to make sure the Judges understand -- is that when there are instances of zero viewing, according to Nielsen -- and I think Mr. Lindstrom would say the same thing -- it is not that there was zero viewing. It's that there was zero recorded viewing.

And so what the regression analysis does is say, "Okay. Let's find out what the expectation of distant viewing is in those instances." And so you can think of an example where Nielsen, because of its small sample, might have zero distant viewing for, for example, I Dream of Jeannie.

And what the Russian does is say, okay, for that one particular example, on the quarter-hour basis, we go back and we look at local ratings. It is five percent. It's relatively high.

It is a syndicated programming of

a certain type. It is broadcast -- retransmitted or broadcast and retransmitted at 4:3 in the afternoon where there is reasonable viewership. And it is on this station, KPIX, that has lots of distant subscribers, together with other variables. Please look at my regression results.

For all of these host of variables, I am going to tell you what I expect distant viewing for I Dream of Jeannie to be. And it might be 1,000 households, even though Nielsen records zero from their small sample.

Mine is statistically valid, and I'm comfortable with it, which if you aggregate them all up, they will be very similar for that subset of cases where we have distant viewing.

Q In doing all of that, you are able to say 80 percent, no, it's not 80 percent, not even 20 percent, it's less than one. That's what you concluded, correct?

A My conclusion is distant viewing, based upon my sample of randomly selected stations, has an incidence of less than one percent of distant viewing. Zero.

Q And just to clarify, you did then do an analysis of distant viewing. I had asked you that before and you said no, and maybe it was in a different context. But, obviously, you did do an analysis of distant viewing.

A I thought your question was about zero viewing. I --

Q I'm sorry. It is. I'm getting mixed up. I had asked you earlier on if you did an analysis of the instances of zero viewing, and you said no. But now you have described what we have just been talking about. What I interpret that to mean is that you didn't do an analysis of distant viewing in the Nielsen data itself; you did the analysis you have just described now on essentially reanalyzing distant viewing or

zero viewing. Apologize.

A I think you are misconstruing my testimony. Actually, that was back when I kept on giving long answers and you wanted a yes or no. And my long answer was, essentially, I did look at the data, I saw the instances of zero viewing. I may not have counted them, but I took my regression model -- I mean, that's the reason why I used this particular regression model was to deal with these instances of zero viewing. That's what I did.

Q Did you ever calculate what percentage of the programs measured in the Nielsen diary data, no matter whether they were one broadcast or a thousand, ended up according a zero value? Or showing a zero value?

A You are referring now to Nielsen diary data. So you're saying in the raw Nielsen diary data?

Q Yeah. Program, by program.

A I don't recall doing that.

Q Let me ask you to take a look at Exhibit 4 to the IPG rebuttal testimony. Actually, strike that. I am going to take a look at that. You can if you want to, but you don't need to actually.

Now, you worked with Kelvin Patterson from Reznick, correct?

A Mr. Patterson provided me via counsel several databases. I don't working with him directly.

Q Okay. You received from Reznick, though, the raw Nielsen data, correct? I'm sorry. That's -- I'm mistaken, I apologize.

I believe what you received from Reznick was raw broadcast data from Tribune, is that correct?

A Tribune. That's correct.

Q And that was for the group of 81 to 125 stations selected by Ms. Kessler, correct? And also the 125 by you, correct?

A That's correct. It was two data

files.

Q Okay. Now, Mr. Patterson testified that he had excluded from those data sets provided by Reznick to you broadcasts of non-compensable programming. Was that actually the case?

A I think as I described in my direct, and also as in the roadmap document that I provided to you, he also -- he said he did that, but he actually failed to exclude certain network programming that I discovered in analyzing the data.

Q Okay. Now, the Nielsen data that you used on this, let me ask you to look at Exhibit 2 to the rebuttal there, not Exhibit 4, sorry. Exhibit 2 is just a list of electronic files that were produced to IPG. And I believe within that list that you see in Exhibit 2 are the Nielsen diary data and Nielsen local ratings data electronic files. Is that the case? Am I correct?

A It should be, yes.

Q Okay. And just, you know, so that we can move beyond should be, if you can just take a look at it to see if it is actually represented there or not. It may be; it may not.

A Yes. Under the subheading, it appears to be under Lindstrom, comma, Gray.

Q Okay.

A There is the Nielsen diary data followed by the Nielsen local ratings data.

Q You recognize those titles to those electronic databases?

A Yes.

Q Okay. Now, with regard to them, I believe within them are -- pardon me just for a minute. Now, the MPAA asserted a claim to, I think we've been told, 1,600 different titles. Is that familiar to you? That was in Appendix C of Ms. Kessler's --

A It seems low. So that doesn't sound familiar.

Q Now, this was not programs. I may

have said that --

A Claims --

Q -- it was titles, 11,600 titles.

A That number is bigger.

(Laughter.)

Q My apologies to everyone. Things are catching up with me.

A Well, I'm trying to pay attention. Yeah. I recall that number from the Kessler testimony.

Q Okay. Thank you. I apologize again, everybody.

That was in Appendix C to the Kessler testimony. Does that sound familiar?

A It could be. I'd have to doublecheck the Kessler testimony. I recall reading it in her testimony.

Q Now, was that provided to you in an electronic file? I mean, was it just a big stack of paper, or was it probably an electronic file, I presume?

A I believe it was electronic, but

I'd have to ask the team. I had to -- a team of data folks who did a lot of the analysis.

Q Okay. To manipulate a number like that, I presume it could conceivably be done by hand, but it would be very long, tedious, and generally would be done using an electronic file, correct?

A Yeah. If I were to receive a hard copy of that, I would certainly code it into an electronic copy.

Q To be able to use it.

A Right. I would -- yeah, I would -- it's been a long time since I worked with 11,000 entries by hand. But, yeah, if I -- if during the course of some litigation or regulatory proceedings I received hard copies, which has happened to me in the past, then I would manually -- or have it coded into the computer.

Q It's a labor-saving step if you get it electronically, correct?

A I would say yes.

Q Do you know whether or not such an electronic file was ever provided to IPG in this matter?

A I don't know what was provided to IPG.

Q Fair enough. Now, when you used that file of 11,600 titles to do your analysis, I presume that it generated -- or I believe we know that it resulted in an electronic file called detail of diary matches, correct?

A I'll have to find this on the list.

Q I don't know, it may not be on the list. I don't know. But I'm just -- just from your memory, was there some sort of file generated in that regard?

A Well, actually, I think that was prepared by Reznick is my recollection.

Q Fair enough. It was a little unclear to me. And then it was provided to you to then use, correct?

A That's correct. And, you know, that would be then the list of compensable MPAA programming by broadcast and station.

Q Okay. I beg your pardon. Just bear with me for a moment.

(Pause.)

Now, looking at Exhibit 2 again, there is a file with the title Nie100. Do you see that?

A I see Niel00.txt. Is that what you're referring to?

Q It is. Is that an example of the Nielsen diary data for 2000?

A Yes.

Q And is it accurate that the Nielsen file format is the legend for data appearing in Nie100?

A Again, that's Niel00.txt. The way to remember it perhaps for you is that's for Nielsen double zero.

Q Makes sense. Thank you.

A Sure. But to answer your

question, yes, the -- my recollection is the Nielsen file format had a data legend and/or layout.

Q Okay. I'd like to introduce a -- or mark a new exhibit, and I believe we are at 505. I hope we're at 505.

CHIEF JUDGE BARNETT: I think so.

(Whereupon, the above-referred to document was marked as IPG Exhibit No. 505 for identification.)

BY MR. BOYDSTON:

Q And my question is if this is the Nielsen -- it says Nielsen file format. But I believe that these are the 13 fields in that document, is that familiar to you?

A Reasonably familiar. I would have handed this over to my data folks, so I would not have perused it.

Q Do the 13 fields here look like the 13 fields that you would typically have in this sort of a document? There is not something in here that you are looking -- you

say, "Left-handed monkeys? We don't have that file. We never had that sort of a column."

A I think the answer to that is yes.

Q Thank you. I'd like to introduce or mark another exhibit, 506.

(Whereupon, the above-referred to document was marked as IPG Exhibit No. 506 for identification.)

Now, I'll represent to you that this is a printout of the file you were just talking about, Nielsen00. And based upon your familiarity with that file, does this look familiar, or does it look like what you would expect to see from such a printout?

A It has been a long time since I looked at the actual Nielsen data, so I would actually have to doublecheck with the team who actually read in the data to see if this represents all of the fields, and so forth.

Q Well, that is kind of where I was going with my question is it only seems to have eight fields. Can you think of any

reason -- to the extent that the Nielsen file format I marked as Exhibit 505 represents there's 13 fields, and this document, which is a printout of this electronic file, Niel00, doesn't seem to have 13 fields, do you have any hypothesis as to why that would be?

A No. I'd have to doublecheck. I could start guessing what the fields would be, but no reason to guess at this point.

Q So you don't have any personal knowledge as to why there are five fields different between these two.

A I don't have any personal knowledge at the moment, no.

Q Okay. Were you involved at all with MPAA's production of electronic files to IPG in this matter? Did you assist in that in any way?

A Only insofar as I told them which of the raw files that one needed in order to replicate my analysis.

Q Okay.

A And so I underscored which were the files.

Q Is it fair to say that you didn't perform some sort of function to knock out five fields before production occurred?

A No. I didn't make any adjustments to the raw data. There is a good chance -- I could check with the team and get back to you, you or the Judges -- that this is the raw data we relied upon. But I don't recall right now.

Q Now, your testimony is that you implemented your regression analysis with the electronic files provided to you by Kelvin Patterson from Reznick. I think I've asked that more than once perhaps, but that's the case, correct?

A Among other electronic files, yes.

Q And were two of the files you were provided with from Reznick entitled detail of diary matches and detail of local matches?

A Correct. By year, 2000 through 2003, four of each.

Q And what is the name of the electronic file that resulted after the implementation of the regression analysis?

A I don't know what you mean by that.

Q Well, you took those files and you performed a regression analysis.

A Correct.

Q What was the product of the regression analysis?

A Well, the product of the regression analysis -- we talked about this earlier today -- ultimately was going to be sort of predicted distant viewing on the quarter-hour basis.

And then, within the program, sum that up for IPG and MPAA to calculate viewership shares each year.

Q So did that result in some sort of electronic file or electronic process?

A It resulted in an electronic number. I think the number that is now in the

report.

Q Well, but just further back upstream, if you will, wasn't there a point at which -- weren't there intermediary things that were produced to then arrive at the final number?

I know the final number is a big -- is this adding up, like you described before, but higher up the stream weren't there other points at which you took these two files we just identified -- detail of diary matches and detail of local matches -- and then put them into a regression analysis to come up with the platform upon which you would make the final determination?

A Yeah. I would actually go back to my testimony earlier today, which is that there are five data sources that combine together. And so then those five data sources, once combined together, form the basis for running the regression analysis. So we were -- and those five data sources were

actually listed on this file here.

Q In your statement you said, and I quote, "For each of these stations and years, I obtained the Nielsen local ratings data. I then merged the local ratings data with the Tribune data." When you did that, did that produce some sort of an electronic file with the results of it?

A Yeah. Oh, if -- when I say I combined all five, I don't combine all five instantaneously.

Q Right. That's what I was getting at.

A Sure. It goes like this, start with one, you add another, you add a third, a fourth, and actually there are two in the fifth, and then you add the fifth. And then you add those all together.

Q Right.

A So when I say combine them, they are done sequentially.

Q And so focusing on this process I

just read, which I will read again for everyone's clarity, "For each of these stations and years, I obtained the Nielsen local ratings data. I then merged the local ratings data with the Tribune data." Is that number one in your finger analogy, or is that further down the line? I think it's number one, but --

A The short answer is it doesn't matter.

Q Okay. Fair enough.

A The order of the merging doesn't matter. You will get the same end result. It could be one and two, it could be two and three, but so -- yeah, it's one of the four merges out of the five.

Q That's one of the four, though, correct?

A Correct.

Q Now, when you did that merge, did it create an electronic file?

A Yeah. It will be a temporary

file. Yeah, absolutely. So it --

Q Can you make it move from temporary to permanent?

A Can you?

Q Yes.

A You could. Imagine if you have Data Set 1, call it Data Set 1, Data Set 2. So in your program you set those two, and then you merge by -- if I can describe the code to you, by station, date, quarter-hour. And you have to normalize the quarter-hour because there is inconsistency across some of the data. And say merge, and then those two are now together, and you have a new data set.

And then you -- and so this now is called Data Set 3. You can call it whatever you want. You could call it temp.

Q Okay.

A Or your monkey.

Q Now, this temporary data file, it wasn't saved, then, it was temporary, correct?

A Yeah. Hard drives are cheap these

days. You could save it, but there's no reason to.

Q Okay. But just to be clear, it could have been saved; it was not, true?

A Yes. It could have been saved.

Q Okay.

A But I see no reason to save it.

Q And then, if I could have you look back at Exhibit 2 again in the rebuttal testimony. That's the list of various electronic folders and files produced by MPAA. I presume, since it wasn't saved, the file created by this process we have just been discussing is nowhere on this document of course, right? Because it wasn't saved and it wasn't produced, correct?

A Well, it depends on what you mean by "nowhere on." It is in there insofar as one and two are on there. But, yeah, but --

Q But not the joinder.

A Oh, yeah. I -- yeah. If you wanted to give me a bunch of joinders, I could

buy a big terabyte hard drive and turn it over. But I don't quite see the point of that. All I --

Q I'm not asking if you know the point of it. I'm asking if it was done, and I think the answer is simply no, it was not, right?

A I gave you Data Set 1 and Data Set 2, and I said combine them. But I did not provide you the combined Data Set 1 and 2, correct.

Q Did you provide the program with which to combine the two?

A No. Instead, I provided I guess a roadmap, if you will.

Q Okay.

A Or a description.

Q The roadmap, did that include the computer program to do that process with?

A No. It essentially said something along the lines of merge or combine, and so I would think someone who is experienced with

working with data would have no problem.

Again, as I described earlier, one of the reasons why I wanted to make sure before -- that was replicable is I had a separate team within my firm. I gave them the roadmap and the data and said, "Can you replicate it?" Gave it to them and they did. So I felt reasonably comfortable that one should if not get it exactly, get it darn close.

And given how robust the results are, it would be surprising to me for anyone who sort of followed the steps to get very, very close to the results.

Q What were the qualifications of the people that you gave it to to replicate?

A Ph.D. in economics, together with people with data experience.

Q Probably something a man on the street could not do. Fair enough?

A Depends which man on the street, I would respond. But I would say a randomly

chosen person would probably have difficulty merging a bunch of data sets together, yes.

Q Now, I think one of the next steps, or at least it came -- this is the way it came sequentially in your testimony -- was you say, "I can, therefore, calculate a distant ratings measure as the number of distant viewers of the stations of each 15-minute time interval from the diary data provided by the total" -- excuse me -- "divided by the total number of distant subscribers of that station from the CDC data."

Could you explain to us -- this explains a lot of it. But could you explain to us what that process was?

A That's a good question. Actually, I wrote this some time ago. And what I --

Q Is it fair to say that the idea here was to create a distant rating for a particular time period?

A Well, the description says I could

do it, but what's interesting -- when I reread this I go, what? Why did I write it that way? Sometimes when you write something it seems very clear to you at the time. You read it nine months later and you say, "I could have been a little clearer." And I apologize for that.

But ultimately what I did was I -- as how I described it earlier in my testimony, that I looked at the relationship between distant viewing and local ratings holding constant the number of distant subscribers. Mathematically, that is really looking at distant ratings and local ratings.

So there is truth in what I wrote, but it is -- if I had to rewrite it again, I would probably edit it slightly.

JUDGE STRICKLER: Can I interject a question?

THE WITNESS: Yes.

JUDGE STRICKLER: Looking at your Appendix C, you had your other control

variables. You have a constant, time of day, quarter-hour, year, program type, and station affiliation, indicated variables. Do you see that sort of as a legend at the bottom of your --

THE WITNESS: Yes.

JUDGE STRICKLER: -- first table, C.1? did you ever hold local ratings constant to see whether or not those other variables had an impact on distant viewers, in particular time of day?

THE WITNESS: Yes. And it does. They are all very significant.

JUDGE STRICKLER: So if you held local ratings constant --

THE WITNESS: Right.

JUDGE STRICKLER: -- and you simply looked at it for a correlation between time of day and distant viewers, you say there is a tight fit?

THE WITNESS: Yes. Absolutely.

JUDGE STRICKLER: Tighter than the

correlation between local ratings and distant viewers?

THE WITNESS: Tighter. Well, two things. One is, when you say hold local ratings constant, that's effectively what I'm doing with the regression. So I'm holding the log of local ratings constant. And I don't know -- there is also -- I turned over the log file. Maybe it should have been -- I don't want to -- I can't remember how many variables. It's small. This actually winds up being, you know, 60, 80 -- 60 or 80 variables, so I didn't put it in the appendix. But it is in the log file that was turned over to IPG, as I understand.

To answer the question, each of those quarter-hour dummy variables, I think each and every one -- I'd doublecheck -- was statistically significant, even holding constant log of local ratings.

When you say a tighter fit, I'd say even -- this is the important part. Even

holding constant, the quarter-hour of the day -- so what's four times 24 would be the number. Even holding all of those constant --

JUDGE STRICKLER: 96.

THE WITNESS: 96. So there is 96 -- actually, 95 dummy variables because you have to remove one. So holding all of those time periods constant, local ratings is still very, very important. So that's what that coefficient tells you is holding the quarter-hour constant, what is the -- and these other factors, what is the relationship between local ratings and distant viewing?

JUDGE STRICKLER: But if there is a correlation -- maybe I'm missing something here, but if there's a correlation between time -- leaving aside the local ratings issue for a second, if there is a correlation between time of day and number of distant viewers, is that at all similar to the time weight factor that was attempted by IPG in its analysis?

THE WITNESS: Good question. And so that's why I said -- I described in my testimony that his proposal in some ways is a --

JUDGE STRICKLER: Crude approximation?

THE WITNESS: -- crude approximation. So in --

JUDGE STRICKLER: That was my next question.

THE WITNESS: Yeah.

JUDGE STRICKLER: So you have already at length told us why it was crude. Now I think you are telling us why it was still approximate.

THE WITNESS: Right. Well, and kind of crude and approximate are going together, but yes.

JUDGE STRICKLER: So if there was a correlation, as you say, between time of day and the number of distant viewers, do you know what it was? Or offhand you don't know?

THE WITNESS: Well, again, what I would have is 96 dummy variables. So I actually have 95 with a constant, 96 correlations. And so what you'll see is in -- you know, from midnight through 6:00 a.m. it's negative. And so it becomes positive. So the kind of trends you expect to see, but each quarter-hour was statistically significant.

Does that answer your question?

JUDGE STRICKLER: I think it does. Let me ask you, if there was this good correlation between time of day and distant viewers, and that is part of what IPG did, to try to make that correlation --

THE WITNESS: Yeah.

JUDGE STRICKLER: -- why didn't you include it in Appendix C? Why didn't you show that same -- have those coefficients in here as well?

THE WITNESS: Well, as I said earlier, maybe I should have because there would have been about 200 -- not 200, I'm

trying to remember the number, but maybe 120 variables. And so I just thought for focus one could do it. But it might be in someone's manila folders.

JUDGE STRICKLER: It couldn't have been reduced to a line or two item on the table the way you have it here on Exhibit --

THE WITNESS: No. Because I estimated for every single quarter-hour. So I estimated the relationship between the quarter-hour, like from midnight to --

JUDGE STRICKLER: 12:15.

THE WITNESS: -- 12:15. Thank you. Sorry, I'm getting a little tired. From 12:15, 12:30, each of those is in there. So I have 95 dummy variables. Each has a coefficient between that and distant viewing.

And, actually, I printed it out and my eyes blurred. And I did that because I didn't want your eyes to blur. We could certainly produce it to you, but -- two things. He has it over there, so he could

show it to you.

MR. BOYDSTON: Your Honor, I would like to mark this as Exhibit 507.

(Whereupon, the above-referred to document was marked as IPG Exhibit No. 507 for identification.)

JUDGE STRICKLER: You were anticipating this.

THE WITNESS: Should I wait for the question, or should I start walking through it.

JUDGE STRICKLER: Wait for the question, please.

BY MR. BOYDSTON:

Q Mr. Gray, I feel like the guy coming on after the show has begun, but you see what has been marked as Exhibit 507. Could you tell us what this is?

A Sure. Well, the first part of this is the Poisson regression analysis that I as describing. In particular, this first regression is the one for -- not for WGN. So

that's the one that I used to estimate the relationship between local ratings, market size, time of day, and now you see I am actually turning the pages on time of day, year, affiliation, and program type.

So I estimate that relationship -- between that and the distant viewing. And distant viewing is wght_house_proj. Nice intuitive label.

MR. BOYDSTON: And, Your Honor, I would like to move that Exhibit 507 be admitted.

MR. OLANIRAN: No objection.

MR. HARRINGTON: No objection.

CHIEF JUDGE BARNETT: Exhibit 507 is admitted.

(Whereupon, the above-referred to document, previously marked as IPG Exhibit No. 507 for identification, was admitted into evidence.)

BY MR. BOYDSTON:

Q Now, and if I missed something in your explanation of what this is, I apologize. Where in the process of your calculations does this come in? You gave me a really handy hand model before. Perhaps you could help me by telling me where this fits into that.

A Sure. It comes in at the first, which is all five data sources combined. Now, once you have them all combined, you have all -- and I say this in the direct testimony, you have all of these different variables, and then you run the regression.

So you would run this first code that says -- that little dot on the side, Poisson weight house, et cetera. So that -- and so what that does is tells your nice little computer to run a Poisson regression with the following control variables.

And so the variable of interest, as I described before, the outcome variable is distant viewing, which Nielsen calls weighted household projection.

Q Now, I see in here the 95 or -- well, you said 96 -- 95, 96 different computations. Those are the ones that start on the first page and run down -- the numbers run -- numbers 1 through 22 run down the left-hand side of the page, is that correct?

A Right.

Q And then continue on to the following page?

A Right. Those are normalized quarters, so quarter zero is midnight to 12:15, or, I'm sorry, quarter one, which is -- as I described earlier, you always have to, for those of you who love statistics, you always have to drop one dummy variable.

And so we dropped the midnight to 12:15, because all these dummy variables measure is what that time of day is relative to something. So that's why you drop one. So it's relative to midnight to 12:15.

Q Now, on the fourth -- excuse me, the third page of this exhibit, at the

beginning it says 86, and then it goes down to 96. And then after that it says year, and it says 2001, 2002, 2003. I assume those refer to those particular years, correct?

A Correct.

Q Is there a reason why 2002 isn't there?

A Do you mean 2000?

Q Excuse me. 2000.

A Yeah. For the same reason, which is when you have dummy variables -- and I can define dummy variables -- what you are doing is estimating how those years are relative to something. So you always drop one. So those three estimates are how the regression is impactive relative to the year 2000.

Q Understood. Underneath that it says IND, UPN, and WB.

A Yes.

Q Those sound like Independent, the UPN Network, and Warner Brothers. Is that what those are for?

A That's correct, yes.

Q And what is the purpose of those figures?

A Again, we are trying to sort of estimate as precisely as possible distant viewing. So we are looking at variables in the data sets, and this is from the Tribune data, those particular variables.

Whether or not if the program was broadcast and retransmitted, or if it was broadcast on UPN, does that have an impact on distant viewing? And one can think of reasons why it might. For example, perhaps the quality of a program was different on UPN than other programs. Apparently not with respect to distant viewing.

So, anyway, they are in there just to try to as precisely estimate as possible distant viewing.

Q And then, beneath that it says what looks like an abbreviation of program type 1, 2, 3, et cetera. What are those

referring to?

A Right. Those are the various different program types included in the program supplier category from the Tribune data.

Q So they correspond with the Tribune nomenclature which runs 1 to 30 for different types of programs, correct?

A Yes.

Q Now, beneath the dashed line that cuts across the page towards the bottom, there then appears to be a dot and it says "predict double view," underline hat, underline POI, and then a semicolon. What does that refer to?

A That is a very complicated process that the computer -- you only have to write that one code to tell them to do it. That is actually predicting for every single quarter-hour what distant viewing is based upon that regression result. So that one line does the sort of projections that we described earlier.

Q And so is that essentially -- the way this is portrayed here on this page, is that essentially reflecting a command for that process to take place?

A Yes.

Q Where is the product of that? Did it exist in another temporary file, or is it some other file?

A Again, it would exist in the RAM of this computer, so it never existed on the hard drive. So by "RAM" I mean random access memory. So it -- what the computer does is for these millions and millions of observations -- in this case where we're doing quarter-hour stuff -- it makes these projections and holds on to them, and then later there is code to tell it to sum it up and create the relative viewership numbers.

Q So the product of applying this predictable view, etcetera, as you said, was never saved on the hard drive. It was in the RAM. It could have been saved on the hard

drive, correct, if the hard drive was big enough?

MR. OLANIRAN: Objection. Your Honor, asked and answered.

CHIEF JUDGE BARNETT: Sustained.

BY MR. BOYDSTON:

Q Was it saved?

A It was not saved, no.

Q Okay. Did anyone ever tell you that those sorts of things should be saved in your study and in the process of doing your study?

A I have never heard such a position before, in large part because it is easily replicable. So, again, if you start with the raw data, merge all -- you press the code, you generate it again.

So, for example, if I were an expert and someone else gave me those millions of numbers, my response is, why are you giving me these millions of numbers? Give me your raw data, and give me your specification.

That's what I did.

Q But if you're not an expert, then you wouldn't know what this is, would you?

A I'd defer to the people out here to the right in terms of this, but possibly.

Q Underneath that there is a -- it says -- it appears, parenthetical, option and assumed, semicolon, predicted number of events, paren, end paren. What does that refer to?

A That's essentially just the program telling you, "Just so you know, we're doing this for everybody."

Q Got it. And then underneath that, dot P-O-I-S-O -- excuse me.

A Poisson?

Q Poisson, P-O-I-S-S-O-N, then dash or a space, W-G-H-T, space, house, space, log, underline, L-R-F, et cetera. What does that refer to?

A Actually, if you'll look back up to the prior -- the very beginning of the log

file, this is repeating the same regression but doing it only for WGN. And so if you look at actually towards the end of this command, actually it's a command that sort of flips over two lines -- just so you know, that little caret, the sign to the side, lets you know that it is a part of the same command.

But it says if WGN equals equals one, so that's telling the computer run this Poisson regression -- Poisson was a statistician back in the 1800s -- run this regression, but only do it for WGN.

Q Okay. And that was done, I presume.

A Yes. If you start turning over the pages, you will see that it was done, yes.

Q And as you say, turn over the pages. Actually, before we turn the pages, a line or two down then it says -- it starts saying, note, colon, and different things come in. What do those refer to?

A Sure.

Q Why don't we just start with the first one, note, colon, aff omitted because of colinearity.

A Colinearity -- yeah. What that tells you is that there is no variation in the sort of affiliate for this particular regression. The reason why that is is it's all WGN. Program types, it will be the same thing. What that's telling you is that there is no program type of one, two, or three, on any of these broadcasts.

So the computer is saying, "I can't estimate a coefficient for that," so it just drops it. You could do it manually, but this is just a much more efficient way. And it goes on. So there are a lot of different types of programs that apparently are not carried on WGN.

Q Okay. Let me -- at some point, I think about page 4, we start getting page numbers on this, which is handy, but the first three, for whatever reason, they aren't there.

If you turn to the sixth page, which conveniently says page 6 at the bottom of it, again, we see the reference to the 30 Tribune program types. We see above that references to the years 2001 to 2003. But, then again, underneath the dashed line I think it is that same -- but you correct me if I'm wrong -- in that same command, dot, predict double view, hat, Poi, WGN. What does it mean, where it is put there on that page?

A Oh. What that is telling me is that -- essentially create a new variable called view, hat, underscore, Poi, slash WGN. And the reason is that we are going to combine it later, and I don't want to confuse these different projections.

So what this is is saying, if WGN is one, make -- oh, I'm sorry. I can't tell you to rewind. It's getting late in the day.

So this is now being run on the same database. And we have -- for everybody but WGN, we have predicted viewing. And so

what the computer would have done, if you look actually back up at the very first -- this is a long time ago -- at the very first page, you'll see it was run August 21, 2012.

The first regression is WGN is equal to zero. And then we did the -- we predicted distant viewing for everyone in that regression. But what the computer is going to do -- well, for WGN, it is missing, so it will set the value equal to missing.

So this step says, okay, we've now just run the regression. From this regression with WGN, stick the value of the predicted back into -- I hope this makes sense to you all -- into -- because I don't want to have to say it again -- into view, hat, underscore, Poi. Was that close to clear?

Q Well, it is what it is.

A Okay.

JUDGE STRICKLER: May I ask a question?

MR. BOYDSTON: Thank you.

JUDGE STRICKLER: Not on that, actually, but on this document. Just so I understand, and maybe you can explain in lay terms perhaps, the significance, or lack thereof.

If you'd turn to page 2 of Exhibit 507 in evidence --

THE WITNESS: Yes.

JUDGE STRICKLER: -- there is line item 80. And this is based on quarter of an hours -- quarter-hour segments starting from midnight, correct?

THE WITNESS: Correct.

JUDGE STRICKLER: So correct me if I'm wrong, but that would be the 8:00 p.m. to 8:15 viewing time period, is that right?

THE WITNESS: That's right, yes.

JUDGE STRICKLER: Okay. What is the significance of the 1.221914 coefficient?

THE WITNESS: Sure. What that tells you is distant viewing goes up by 1.22 percentage points for that particular quarter-

hour, all else equal. So it's easily interpretable, because this is a Poisson. What a Poisson regression means, maybe I should take a step back, is you are running a regression of the -- of distant viewing on the exponent of all of these independent variables.

And so, as a result, when you interpret these coefficients, you are really doing this -- it's the change in the log of the dependent variable over the change in the X variable.

I'll say that for those of you up there who love statistics. And so the interpretation, then, is it is different for the first two variables. It's different for the log variables. For the non-log variables, it means -- this means how much does a one unit change in this affect the percentage point difference in weighted house projection.

So, again, I don't know if I should have said so much. A 1.22 percent

increase, all else equal, distant viewing goes up for that quarter-hour.

JUDGE STRICKLER: And on the next page, when you do it by year, 2001, 2002, 2003, is that in any sense the average of all of those 15-minute time intervals?

THE WITNESS: No. That is sort of just capturing general time trend. And so what this is showing you is, relative to the year 2000, distant viewing actually has decreased slightly in percentage terms.

JUDGE STRICKLER: Okay. So that is simply a comparison to 2000, not an average.

THE WITNESS: Correct.

JUDGE STRICKLER: Is there any statistical merit, in your opinion, to averaging out the 96 different time periods? And I guess you would have to drop the -- you would use absolute value rather than the negative and the positive to try to get -- to figure out what the average fit is between

time of day and distant viewing?

THE WITNESS: Oh. I think the simpler way -- I mean, I think you're asking this way -- if not, correct me. I think a simpler way would be to drop the other independent variables.

JUDGE STRICKLER: Right. Yeah.

THE WITNESS: And so would there be merit? Yes, there would be some merit. The problem is, I would want to ideally more precisely estimate distant viewing. And what you'll see -- gosh, let's look at log local ratings, because I find this huge, is that even holding constant the quarter-hour --

JUDGE STRICKLER: Where are you now?

THE WITNESS: I'm sorry. This is on page 1, and this will be the very first independent variable. So right under weight_house_projected.

JUDGE STRICKLER: Right.

THE WITNESS: You have log_LR.

JUDGE STRICKLER: Right. And that's the same thing -- that's the number that we find as your coefficient estimate on Table C.1.

THE WITNESS: Correct.

JUDGE STRICKLER: Right.

THE WITNESS: And it matches, then, Kelvin's. And, anyway, but what that says is even holding those quarter-hours constant, and because it's a log, then it is going to be log on log, so it's actually an elasticity. So a one percent increase in log ratings leads to half a percent increase in distant viewing, which is -- and that is holding everything constant.

JUDGE STRICKLER: That is measuring the change in log rate, local ratings relative to distant viewers.

THE WITNESS: Right.

JUDGE STRICKLER: My question is, what is the fit with regard to time of day?

THE WITNESS: I could find out.

But by "fit," do you mean like how much of it does it explain?

JUDGE STRICKLER: Right. And, again, the reason I'm asking this is not academic interest, it's because it strikes me -- and I think you've said so -- that it is in some sense part and parcel of what IPG was trying to get at with regard to a time factor. So I want to see how significant it is, not from their numbers necessarily, but with your numbers.

THE WITNESS: Oh. I --

JUDGE STRICKLER: So what is the answer? How significant is it? And is it more significant or less significant or as significant as your correlation between local ratings and distant viewers?

THE WITNESS: I see your question. It took me a while. You've asked me two or three times. I finally understand. The answer is I could do the test to find out which one sort of has more, actually, I would

say explanatory power.

But from my perspective, I would say why stop with time period. You know, in addition to time period, let's control for, you know, other aspects that predict distant viewing. But is it more or less? I don't know sitting here. It could be more, but, even if it is more, I'd say let's start with it and build from there. Does that make sense?

JUDGE STRICKLER: It makes sense, but you could do it on all of your various variables that you either controlled or didn't control, depending on which one you were trying to -- which change you were trying to isolate, right?

THE WITNESS: Correct. Absolutely correct.

JUDGE STRICKLER: And it didn't seem important to you -- let me ask you that -- didn't it seem important to you to do that kind of correlation between time of day and

distant viewership in light of what IPG was arguing?

THE WITNESS: Oh. What I would say is -- what the regression shows is, actually, IPG is right that time of day matters. It matters a lot. So no question, I agree with that.

And so, but what this also shows is, in addition to time of day, local ratings matters a lot. They both matter, so -- which one matters more? Even if time -- you know, I don't know. If time of day doesn't -- unless it matters more, I still don't see why we wouldn't control for local ratings.

JUDGE STRICKLER: Well, I'm not saying you wouldn't, but you would want to have a control with regard to -- so that you could isolate each variable.

THE WITNESS: Yeah. No, absolutely. So is your question, why don't I just -- why don't I report all of these in my --

JUDGE STRICKLER: Yes.

THE WITNESS: I now wish I had is the long answer. I guess the answer is, is flipping it, I guess I thought you would find this mind-numbing looking at these three pages of coefficients. But, by all means, I think each and every one is important. I also think -- as I say in my report, I think program type is important, and I don't report those either.

JUDGE STRICKLER: I understand that. And how did you determine your constant?

THE WITNESS: It's the variant.

JUDGE STRICKLER: Of the --

THE WITNESS: I'm sorry. Are you asking me, where is the constant?

JUDGE STRICKLER: Yes.

THE WITNESS: This is -- clearly, you have a statistics background. That's at the very end of the coefficients is the default for this particular statistical software. So this is on page 3, underscore,

constant. I'm sorry, underscore, C-O-N-S.

JUDGE STRICKLER: Page 3?

THE WITNESS: Yes. So it's on page 3, right above all of those little hash lines.

JUDGE STRICKLER: Yeah.

THE WITNESS: That's the constant.

JUDGE STRICKLER: Thank you.

CHIEF JUDGE BARNETT: Dr. Gray, I just want to say that this is probably mind-numbing for everyone except Judge Strickler.

(Laughter.)

Lest you get carried away.

THE WITNESS: Should I say no offense taken? I don't know.

(Laughter.)

BY MR. BOYDSTON:

Q Mr. Gray, have you been advised, or are you familiar with the regulatory requirements governing this proceeding in terms of conducting surveys and conducting studies of this type?

A You know, I don't recall if I have been advised. But sitting here today, I don't recall the specific requirements.

Q Okay. With regard to the colloquy between you and Judge Strickler, the possibility came up of whether or not it might have made sense to perform the calculation in this regard but focusing on the day part viewing, and you responded to the Judge's question in that regard.

And you were asked whether or not -- you know, you were asked whether or not you had done that or you had explained that and you said, "I wish I had." Do you recall that answer?

A Well, to be clear, that "I wish I had" is I wish I had reported this entire regression results in my Appendix C is what I meant by that.

Q Correct. Right, right. Is there any reason in particular you didn't?

A As I said before, just for

presentation purposes.

Q Okay. Now, let's see, we are getting towards the end of the day. I'm going to see if I can move this along a little bit. So what I'm going to do is going to be a little on the abbreviated side, but I think we can make it work.

What I'm interested in establishing, and perhaps you could focus on Exhibit 2, the list of the different databases, I have asked you a couple of questions about different steps along your process where something could have been saved but wasn't. Understood? I'm not going to ask that again on purpose. If I do, I apologize.

I'm going to ask you about several steps in your process and several calculations you made and whether or not an electronic file representing that activity is represented on Exhibit 2. And as I say, I'm going to try not to repeat myself, it's just I don't know if some of these terms -- I'm not sure if I'm

saying the same thing as I said before, so I beg your pardon if I do.

A I just want to make sure I understand. So you're going to go through a series of questions where you ask is -- like you merged these two together. There's a temporary file. Did you save it, did you provide it, et cetera?

Q Yes. That's correct. See, the first item is you went through a process to exclude non-compensable programming. You testified to that. Is there -- did that result in some sort of an electronic file that is represented on Exhibit 2?

A No.

Q You were given a list of 11,600 MPAA-represented titles. I think you testified that you did have an electronic file of the 11,600 MPAA-represented titles. But you didn't know anything about the production of that one way or the other, is that correct?

A My understanding is that the

titles list, that should be there under the 2000 detail of diary matches, and then the 2000 detail of local matches.

Q Now, you're referring to one of the indications on Exhibit 2?

A Yes.

Q I'm sorry. Can you tell me who it's under? Is that under Kessler, Martin, and Gray?

A I want to make sure I get this right. The Patterson-Gray I believe are the listings of compensable titles for IPG and MPAA. Is that what you're asking about or --

Q Well, do you know whether or not any of the electronic databases listed on Exhibit 2 under Patterson-Gray are the list of -- electronic list of 11,600 MPAA titles or not?

A Again, I don't recall -- I don't know if I received the electronic list of 11,600. I'm not sure.

Q Okay. At some point, you

calculated your regression analysis. And I know that's kind of a very broad term, but, obviously, you calculated your electronic -- excuse me, you calculated your regression analysis. And then I believe you testified that resulted in a temp file, correct? Which was not saved, correct?

A Again, it resulted in -- and we just looked over the log files, so maybe I could better articulate it or it is better envisionable, is that when the computer ran that code of predict double -- and "double" means lots of precision -- view, hat, P-O-I -- P-O-I is for Poisson.

So when I do that, then the regression has in its memory for every single quarter-hour the prediction. It was not saved to the hard drive at all. Does that answer your question?

Q I think so. It was not saved on the hard drive. And if it wasn't saved to the hard drive, certainly it wasn't produced.

A No.

Q You merged the Nielsen diary data with the Tribune Media list of stations, correct? Want me to say it again?

A I lost focus.

Q Sure. No problem. Merged the Nielsen diary data with the Tribune Media list of stations.

A Right.

Q Did that result in an electronic file?

A Yeah. It -- you're starting to do -- there were fingers, and I just want to make sure -

Q Right.

A Yeah. So these two fingers must -- would have resulted in a temporary file that I don't -- I can't imagine was produced.

Q Okay. You merged the Nielsen meter data with the Tribune Media list of stations. That's probably --

A Another two fingers, yes.

Q And was that saved?

MR. OLANIRAN: Objection. Your Honor, I think all of these questions have been asked and answered. Dr. Gray has described extensively, probably at least four or five times now, how he performed the regression analysis. And this is just another way --

CHIEF JUDGE BARNETT: I don't need a narrative, Mr. Olaniran.

Do you want to respond to the objection?

MR. BOYDSTON: There's three that I'm pretty sure I haven't asked, and, if I have, it's not because I'm trying to be pedantic but because it is complicated and sometimes it's described one way and sometimes it's described another.

CHIEF JUDGE BARNETT: Overruled. Go ahead.

BY MR. BOYDSTON:

Q Should I reread it -- or restate

it? I am reading it, but would you like me to restate that?

A Please.

Q That you merged the Nielsen meter data with the Tribune Media list of stations.

A Right. Yes. So that merge would result in another temporary file to be merged again later, and that temporary file was not saved or produced.

Q Thank you. You created the distant rating figures from the Nielsen diary data and the CDC distant household information.

A Is that my writing?

Q No, it's probably not. It is probably my scribbling from --

A Okay.

Q -- trying to read your writing, or I should say interpret your writing. You created the distant rating figures from the Nielsen diary data and the CDC distant household information.

A I don't understand that. I don't remember doing anything like that. I'm a little confused by that description.

Q Okay. Did you create a -- what you would call distant rating figures?

A What I'd call what? I'm sorry.

Q Did you calculate what you would call distant rating figures?

A I'm not sure what -- again, by "distant ratings," are you referring now to the regression results? I thought we just asked and answered in terms of the Poisson regression predictions on the quarter-hour basis. Those numbers?

Q I think that's right, yeah.

A Okay. Again, that one was -- that was asked and answered about eight times.

Q Fair enough.

A Yeah.

Q Okay. We don't need to do it again, then. Sorry. But you allocated value between the IPG-claimed and the MPAA-claimed

programming. I think you said that was essentially the -- either the last step or the penultimate step, correct?

A By allocating, are you talking now about the total -- the percentage to MPAA and the percentage to IPG?

Q Yeah, the value.

A Yeah. That will be in the expert testimony. That's the 99.8 percent or so by year.

Q Okay. So is that the final step or is it the next-to-final step?

A Well, once I calculate the total viewership and calculate the percentages, that is going to be the final step.

Q Makes sense to me. Just checking. Did that process -- I assume that process involved also the creation of a computer operation that resulted in some sort of a file or temporary file. Am I correct?

A Well, again, what that -- so what that process is is you have all of those

numbers, so you tell the computer "Add them up and divide by the sum of those two added-up numbers, and spit out that number," and that number I think is actually in the log file.

So the number -- and I can read them because it will be in the testimony, if you want me to read them again --

Q I don't need you to. I understand what you're saying. The numbers that were summed, the list of numbers that were summed to come to that result, are those --

A This is now number nine, because, again, that is the predicted distant viewing for every single show on a quarter-hour basis.

Q And I think I asked about that before and said, "Does that exist in some sort of an electronic or paper format" and the answer was no?

A You have asked many times. The answer is no. Again, that's this millions of observations, and it's retained in RAM.

Q And it's retained in RAM, was not

saved, was not produced, correct?

A Right.

Q Okay. And in addition to not being produced, it wasn't otherwise -- it wasn't produced to IPG. In addition to that, it wasn't otherwise presented to the Judges either, correct, in that form?

A In terms of millions and millions of quarter-hour distant viewing? That was not produced to the Judges, no.

Q Yeah. Other than your testimony about it, it has not been produced to the Judges in another form.

A I have not produced them millions and millions of numbers, no.

Q And this is a close cousin, but it's a different question, is it -- did you ever produce any document or computer file which states the value for all of the particular broadcasts, or any of the particular broadcasts, that we are dealing with in these proceedings? Where one could go

down and say, okay, despite we -- one can look and see that the Tribune data says, okay, we got that broadcast that date; the MPAA value for that is 35. Is there any such document?

A No, there is not any such document that I am aware of.

JUDGE STRICKLER: Counsel, may I ask a question?

MR. BOYDSTON: Sure.

JUDGE STRICKLER: Dr. Gray, you said that you had a team, another team, take a look at your data and run it, and they came up to the same conclusions that you did, correct?

THE WITNESS: Correct.

JUDGE STRICKLER: Was that also within your organization where you work?

THE WITNESS: It was within my organization, yes.

JUDGE STRICKLER: And as far as you know, did you supply or has MPAA supplied in this proceeding the documents to IPG which

you supplied that other team in order to replicate your analysis?

THE WITNESS: My understanding is yes.

BY MR. BOYDSTON:

Q You said your understanding. Is there any reason to qualify it?

A Because I did not see them do it.

JUDGE STRICKLER: Who is the "they"?

THE WITNESS: MPAA. You said, "Did MPAA provide it to IPG?" They told me they did. So that's why I don't like to say yes unless I witnessed it myself.

MR. BOYDSTON: Makes perfect sense.

BY MR. BOYDSTON:

Q In your description of the MPAA methodology, you characterize it as a measure of "potential relative viewership." Is that -- do you recall that that was a quote I pulled out of your --

A By the MPAA or IPG?

Q The IPG. I switched gears.

A Yeah. You're switching. Okay. So I'm -- repeat it, please.

Q I'll reissue it. In your description of the IPG methodology, you characterized it as a measure of "potential relative viewership."

A It sounds like my description, yes.

Q Okay. Where is viewership, in your view, in IPG's station and weight factor?

A Well, it's in there -- it's actually on the potential side. That's why I said potential viewership. The viewership is in the time period weight factor, and the time period weight factor, again, is a -- sort of a viewership index.

Multiply that by the population of distant viewers, which is the station weight factor; together, you get this potential viewership measure.

Q Where does viewership come into the length of a program?

A It comes in, in a sense, on a -- I hope I was careful earlier -- on sort of a per minute basis, if you will. So if you have a certain number of viewers over a half hour, and over the full -- sort of over a full hour, you will have twice as many on sort of a one-half hour basis.

Q You referred to time period weight factor. Where does actual viewership come into the time period weight factor?

A Well, it comes in insofar as he -- this time period weight factor is -- the way it's described is a fraction of the sort of average viewing that takes place over a 24-hour period, average for the particular day part divided by the total viewing over that 24-hour period. So it's a percentage of viewing during that day part.

Q All right. So you seem to be attempting to characterize the decisions that

get made by the CSOs as being viewership-based, correct? That's your paradigm.

A Well, in terms of how relative value can and should be measured, given the homogeneity of programs at issue, yes.

Q And you stated in your direct testimony that the higher the viewership of a program the more valuable it is to a CSO because it leads to higher subscriber retention and attraction. And you've talked about that I think in your testimony.

I haven't -- I am not aware of you citing any outside authority for that proposition. Is there some?

A Well, I would say, one, as I described earlier -- my earlier experiences with a couple of CSOs, I did cite a couple program suppliers in my testimony, I think in a footnote, saying how, from their perspective, when negotiating licenses outside this particular setting of compulsory licenses, that body size matters.

And also, finally, the regression analysis, C.2, looks at the relationship between viewership and subscribers.

Q You referred back to your testimony about working with certain CSOs. How many have you worked with?

A Two.

Q If I could have you take a look at your rebuttal testimony. I don't know whether it's -- it may be up there; I don't know.

A Yes.

Q Okay. Well, good. You include a Table 1, I think, at page 7.

A Yes.

Q And you identify Nielsen viewing households, correct?

A Yes.

Q And the purpose of that is to demonstrate how IPG's time period weight factor is invalid against "household viewership," correct?

A "Invalid" is a strong word for

this particular example. The purpose of the example was just to show how -- give a couple of illustrations of how a program that airs at the same time on the same station might have very different viewing.

Q And the numbers there are 2,108, 765, 8,635, and 18,621, correct?

A Correct. And, again, these are anecdotes, but yes.

Q And isn't it true that even Nielsen itself acknowledges that when you get under 10,000 households the relative error rates begin to get high, correct?

MR. OLANIRAN: Objection. Your Honor, asked and answered.

CHIEF JUDGE BARNETT: Sustained.

BY MR. BOYDSTON:

Q Well, based on that, wouldn't that suggest that these figures are invalid, that the conclusion that you are trying to draw is invalid to the extent that there is a very high error rate when you get below that

threshold?

A No.

Q And why not?

A Well, these are from essentially sample observations, measured with relative error but -- and these are sample observations that ultimately you are going to be aggregated up, as we do later, and they show or demonstrate that the point estimates, whether or not they are measured with relative error, are very different.

Q Well, would you change your opinion, to the extent that the relative error rate for those under 10,000 is as high as 63 percent?

A I would not change my opinion if the relative error rate was approaching 100 percent, which is what actually Mr. Lindstrom testified to, in I believe it was the 1989 proceeding.

Q Now, with regard back to the time period weight factor, you pointed out the

error that was made in the IPG calculation. And I believe we talked about this before, but I am mixing up my experts at the moment.

You did identify, though, that IPG had only included six day part times in calculating its time period weight factor, not 48.

A That's correct, yes.

Q Yes. And that's right, we agreed that a mistake like that ought to be corrected. Now --

A I would think most mistakes should be corrected, though.

Q With regard to the number of stations studied, you've said that you think that the number of stations that were in the MPAA study was sufficient. But from a broader standpoint, to the extent that things like cost, time, other factors like that, were no object, would it ever be better to have a study based on only 81 stations versus three times that, 240, 230? Considering that cost

and time and effort are not an issue.

A Two things. One is that, bear in mind that my analysis is based on approximately 120 random stations per year. The Kessler sample did have one year where it was 81.

But to answer your question, and I think I said this on the record, more data is better if it's randomly chosen. I'd rather have 120 randomly chosen stations than 2- or 300 non-randomly chosen stations.

Q You criticized the IPG study because it was not including Form 1 and 2 cable systems, correct?

A I did note that, yes.

Q Now, where does the information on Form 1 -- the information on Form 1 and Form 2 cable systems, in terms of their distant program -- or their distant retransmissions, where does that come from, if you know?

A From the Cable Data Corporation.

Q And, in fact, it does not come

from the documents that are filled out and turned in to the Copyright Office like Form 3 stations do, correct?

A I believe that is right.

Q They come -- those Form 1 and Form 2 figures come from some sort of process that the CDC does on itself, correct?

A That's my understanding.

Q Do you know any of the details of that methodology?

A I do not know.

JUDGE STRICKLER: Counsel, can I ask a question?

MR. BOYDSTON: Yes.

JUDGE STRICKLER: Before we get too far away from Table 1 in your rebuttal testimony, Dr. Gray --

THE WITNESS: Yes.

JUDGE STRICKLER: -- on page 7, you list the broadcast dates. Do you see the second column? I'll wait until you get there.

THE WITNESS: Yes.

JUDGE STRICKLER: Would you know -- you probably don't know off the top of your head, but do you know whether those dates were weekdays or weekend days?

THE WITNESS: The answer is they are uniform. We did actually check, so I -- they are either both weekday or both weekend. One or the other. But I don't know. Someone with access to the internet can Google it.

JUDGE STRICKLER: But you thought your pairings were consistent, so November 16, 2003, and April 26, 2003, were either both weekdays or both weekends, and the same for the other pairing.

THE WITNESS: Right. That's my -- yeah, that's my recollection. Yes.

JUDGE STRICKLER: Do you recall -- you've done a rebuttal criticizing and commenting on IPG's methodology. Do you know whether they distinguish within that -- whether IPG distinguishes its methodology with regard to broadcast time between times on

weekends and times during weekdays?

THE WITNESS: Well, that's -- it's somewhat of a complicated answer. But the answer is, not in the way they described it; but, yes, in the way they did it. And so by that what I mean is their description of doing the time period weight factor on a half-hour basis doesn't distinguish.

However, their six broad day parts appear to have -- so there are just six values as opposed to 48, but those six vary by weekend and weekday. That makes sense.

JUDGE STRICKLER: And do they give different weight factors for, say, 3:00 in the afternoon on a Sunday versus 3:00 in the afternoon on a Tuesday?

THE WITNESS: Well, they are very broad. So it would be like -- it was like several hours long --

JUDGE STRICKLER: How many hours?

THE WITNESS: Well, there are six throughout the entire or six time period

weight factors throughout the entire week. I think there might have been -- better if he does it. Maybe I'll stop. I don't remember.

JUDGE STRICKLER: Okay. Thank you.

BY MR. BOYDSTON:

Q Isn't it true that Ms. Kessler's station sample relied on Form 3 data and not Form 1 and Form 2?

A That's my understanding, yes.

Q Now, with regard to your argument or your observation or critique, if you will, that the IPG study excluded certain compensable program titles, isn't it true that both the MPAA and IPG obtained data from Tribune Media?

A I don't know what IPG received or obtained, other than what was given to them from us, from MPAA, excuse me.

Q Okay. In your review of the IPG testimony, for what it's worth, did you see reference there to inclusion of the Tribune

Media data in the methodology?

A Yes.

Q And did IPG include title information with any variation from what you saw in Appendix C to the Kessler testimony?

A I'm not quite sure I understand the question. What do you mean by, "Did they include title variation?"

Q Well, did IPG's -- when IPG was calculating the value of the MPAA titles, was there any variation that you noticed in those titles with that that was in the MPAA data, specifically, in Ms. Kessler's Appendix C?

A I'm sorry. No, I honestly don't answer -- understand the question. And it's -- I don't know if it's me or you. I apologize.

Q Okay. My understanding is that you had a criticism, and I think I can illustrate it like this, you'll recall in your direct testimony your suggesting that there was -- that IPG was flawed because they had

given credit for a program maybe called Fresh Prince of Bel-Air but not The Fresh Prince of Bel-Air.

A Okay.

Q Did you actually see derivations like that between the actual list in Exhibit C to the Kessler testimony versus the database of MPAA programs that IPG was using? You would actually see that?

A Yes, I actually saw the sort of derivations -- I saw examples of The Fresh Prince of Bel-Air and Fresh Prince of Bel-Air in the IPG data. Is that what you're asking? Yes.

Q Okay. Has anyone ever told you from the MPAA why it is that the MPAA simply didn't provide those exact titles to IPG in electronic format, so that such error could never possibly occur?

A I don't quite -- why would the error occur, not occur -- oh, do you mean in -- I don't quite understand the question

again.

Q Did anyone at the MPAA ever explain to you why they refused to provide IPG with an electronic version of all of those titles to guarantee that they would be accurate when IPG used them?

A I didn't have any conversations with MPAA regarding this.

Q With regard to the inclusion of or non-inclusion -- with regard to -- I should just say regarding Canadian television station broadcasts -- actually, you have already testified about that.

You did state that you saw that Canadian broadcasts were more prevalent in IPG's programs than in the MPAA's. Do you recall the percentage?

A What I stated was -- I want to make sure I get this right -- is the non-compensable programming that IPG attributes to their relative value measure is greater for IPG programming than it is for MPAA

programming.

Q Now, with regard to you said you got a critique about inclusion of claims dismissed by the Judges, is it not the case that IPG's revised numbers have excluded the program broadcast dismissed by the Judges pursuant to their March 21, 2013, order?

A I haven't been able to replicate their resubmitted numbers yet. So I don't know if they --

Q Okay.

A -- excluded them.

Q You have asserted that Raul Galaz -- implicitly was your word -- implicitly stated that there was little or no relationship between the relative number of subscribers and fees generated by a station. Do you know where exactly he stated that? Because we don't.

A Oh. I would have to see his -- I don't -- do you have his direct testimony in front of you?

Q It's there in front of you. I don't think -- it's 4:30 -- we're probably going to look at it. But off the top of your head right now, are you certain that you actually read him -- you've said he said so implicitly. Do you remember where in his analysis you got that? And, if you don't, that's good.

A I think so.

Q It's the end of the day.

A Well, maybe if you could tell me where in my testimony I said it, because I would hope I would footnote it.

Q I believe you said it on page 17.

A Thank you. I don't see it on page 17. Hold on.

CHIEF JUDGE BARNETT: How much more do you have, Mr. Boydston?

MR. BOYDSTON: One more question.

CHIEF JUDGE BARNETT: Okay.

THE WITNESS: Well, let me find that, because it's certainly my recollection

that he tried to suggest that they were very different. And I thought I had a quote in here as well.

BY MR. BOYDSTON:

Q Well, you know, I think we, unfortunately, are coming back tomorrow for -- probably for redirect, so I don't mind letting you figure it out overnight if you'd like that.

MR. OLANIRAN: Your Honor, I actually have the page --

THE WITNESS: Oh, thank you.

MR. OLANIRAN: -- that is being referenced. It's page 18 of Dr. Gray's testimony I think is what Mr. Boydston is referring to.

CHIEF JUDGE BARNETT: Okay.

THE WITNESS: Is this the direct testimony or the amended?

MR. OLANIRAN: Rebuttal.

THE WITNESS: What are we looking at now?

BY MR. BOYDSTON:

Q Why don't we just put this over until tomorrow?

A No. I'll get it, but that's -- and maybe that's why I can't find it. So it's page 18 on the rebuttal. Thank you.

Q Okay.

A In case there is not a tomorrow. You never know, counselor.

(Laughter.)

So I have a quote from the Galaz testimony. Oh. Is it "On a station-by-station basis, due to the vast discrepancy between the number of cable retransmission subscribers and the amount of fees generated by each of the cable stations upon which transmitted broadcasts appeared," to me when he talks about the vast discrepancy between the two, he is implicitly saying that there is a big difference.

Q Well, isn't it accurate that some stations have high subscriber rankings and low

fee generation ranking, and vice versa?

A Well, there's a mathematical correlation of .998 between the two. So --

Q But on an individual basis, isn't it true that there are some stations that happen to have a particular disparity between fees generated and number of subscribers? Not in the aggregate, but I'm saying on a station-by-station basis.

A But the point of this is to say he has two station weight factors. And I don't want my testimony to get too long. All my comments that relate to --

Q Okay. Well, let me just cut it short, because I understand -- and you have given your methodology and you have given your explanation, and that's fair. What I'm asking now is a very discrete question.

Is it not true that there are some stations that, peculiarly enough, may have fee generation at a high level but subscribership at a low level, and vice versa? Does that or

does that not occur? Not what does it mean, what did -- just isn't that the truth?

A But that has nothing to do with what I'm saying here, though.

Q I guess the answer is --

A Well, yeah, there's differences, but my point is that --

Q There are differences. There are circumstances like that, correct?

A -- it's redundant. That's why I say the two metrics are redundant. So there is no need for me to talk about both in detail. There really --

Q Well, actually, there is a need because I'm allowed to ask you questions, and I'm allowed to get answers.

CHIEF JUDGE BARNETT: All right. It's the end of the day. Let me ask, is there going to be cross-examination from the devotionals?

MR. MacLEAN: No, Your Honor.

CHIEF JUDGE BARNETT: And how much

redirect are you going to have, Mr. Olaniran?

MR. OLANIRAN: Probably about 15 minutes worth, if that.

CHIEF JUDGE BARNETT: Fifteen? One five?

MR. OLANIRAN: One five, yes.

CHIEF JUDGE BARNETT: Okay. We are going to be at recess, then, until 9:00 in the morning.

Thank you.

(Whereupon, at 4:35 p.m., the proceedings in the foregoing matter were adjourned, to reconvene at 9:00 a.m., the following day.)

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C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: Distribution of 2000-2003
Cable Royalty Funds

Before: LOC/CRB

Date: 06-04-13

Place: Washington, DC

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

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I hereby certify that on Monday, March 12, 2018 I provided a true and correct copy of the 2000-2003 Phase II Transcript for Jun 4, 2013 to the following:

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MPAA-represented Program Suppliers, represented by Lucy H Plovnick served via Electronic Service at lhp@msk.com

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Canadian Claimants Group, represented by Victor J Cosentino served via Electronic Service at victor.cosentino@larsongaston.com

Signed: /s/ Ann Mace